675	680	685

Glu Glu Ala Val Ala Phe Ile Glu Arg Tyr Phe Gln Ser Phe Pro Lys

Val Arg Ala Trp Ile Glu Lys Thr Leu Glu Glu Gly Arg Lys Arg Gly

Tyr Val Glu Thr Leu Phe Gly Arg Arg Tyr Val Pro Asp Leu Asn 730

Ala Arg Val Lys Ser Val Arg Glu Ala Ala Glu Arg Met Ala Phe Asn

Met Pro Val Gln Gly Thr Ala Ala Asp Leu Met Lys Leu Ala Met Val

Lys Leu Phe Pro Arg Leu Arg Glu Met Gly Ala Arg Met Leu Leu Gln 770 775 780

Val Ala Asn Glu Leu Leu Glu Ala Pro Gln Ala Arg Ala Glu Glu 785 790 795

Val Ala Ala Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro Leu Ala

Val Pro Leu Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu Ser Ala 820 825

Lys Gly His His His His His 835

<210> 2814

<211> 2643

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2814

atgggtgcgg atattggtga cctctttgag agggaagagg tcgagcttga gtacttctca 120

60

ggaaagaaaa ttgccgttga tgctttcaac acgctatacc agttcatctc gataataagg

cagectgaeg gtaegeegtt aaaggaetea cagggeagaa teaectetea eettteegga atcctataca gagtctccaa catggtcgag gtgggaatca ggccggtgtt tgtattcgac ggagagccac cggagttcaa gaaggctgaa attgaggaga ggaaaaaagag aagggctgag gcagaggaga tgtggattgc ggctttgcag gcaggagata aggacgcgaa aaagtatgct caggctgcag ggagggttga cgagtacatt gttgactccg caaagacgct tttaagttac atggggattc cctttgtcga tgccccgtct gaaggagagg cgcaggctgc ttacatggca gcaaaaggcg atgtggagta cacaggaagc caggattacg attetetgct cttcggaagc ccgagactcg ccagaaatct cgcaataacg ggaaaaagga agcttcccgg caaaaatgtc tatgtggatg taaagccgga gataataatt ctggaaagca acctcaaaag gctgggtttg acgagggagc agctcatcga catagcgatt ctggtcggga cggactacaa tgagggtgtg aagggtgtcg gcgtcaagaa ggctttgaac tacatcaaga cctacggaga tattttcagg gcactcaagg ctctgaaagt aaatattgac cacgtagagg agataaggaa tttcttcctg aatcctcctg tgactgacga ctacagaata gagttcaggg agcctgactt tgagaaggcc ategagttee tgtgegagga geacgaette ageagggaga gggtegagaa ggeettggag 1020 aagctcaaag ctctgaagtc aacccaggcc acgcttgaga ggtggttcct ggaggaggcc 1080 ccctggcccc cgccggaagg ggccttcgtg ggcttcgtcc tctcccgccc cgagcccatg tgggcggagc ttaaagccct ggccgcctgc agggggggcc gcgtgcaccg ggcagcagac 1140 1200 cccttggcgg ggctaaagga cctcaaggag gtccggggcc tcctcgccaa ggacctcgcc 1260 gtcttggcct cgagggaggg gctagacctc gtgcccgggg acgaccccat gctcctcgcc tacctcctgg gcccctcgaa caccacccc gagggggtgg cgcggcgcta cgggggggag 1320 1380 tggacggagg acgccgccca ccgggccctc ctctcggaga ggctccatcg gaacctcctt 1440 aagcgcctcg agggggagga gaagctcctt tggctctacc acgaggtgga aaagcccctc tecegggtee tggeceatat ggaggeeace ggggtaegge tggaegtgge etacetteag 1500 gccctttccc tggagcttgc ggaggagatc cgccgcctcg aggaggaggt cttccgcttg 1560 gegggecace cetteaacet caacteeegg gaccagetgg aaagggtget etttgaegag 1620 cttaggette cegeettgaa gaagacgaag aagacaggea agegeteeae cagegeegeg 1680 gtgctggagg ccctacggga ggcccacccc atcgtggaga agatcctcca gcaccgggag 1740 ctcaccaagc tcaagaacac ctacgtggac cccctcccaa gcctcgtcca cccgaggacg 1800 ggccgcctcc acacccgctt caaccagacg gccacggcca cggggaggct tagtagctcc 1860 gaccccaacc tgcagaacat ccccgtccgc accccttgg gccagaggat ccgccgggcc 1920 ttcgtggccg aggcgggttg ggcgttggtg gccctggact atagccagat agagctccgc 1980

180

240

300

360

420

480

540

600

660 720

780

840

900

960

2040 gtcctcgccc acctctccgg ggacgaaaac ctgatcaggg tcttccagga ggggaaggac atccacaccc agaccgcaag ctggatgttc ggcgtccccc cggaggccgt ggaccccctg 2100 atgcgccggg cggccaagac ggtgaacttc ggcgtcctct acggcatgtc cgcccatagg 2160 2220 ctctcccagg agcttgccat cccctacgag gaggcggtgg cctttataga gcgctacttc 2280 caaagettee ccaaggtgeg ggeetggata gaaaagaeee tggaggaggg gaggaagegg ggctacgtgg aaaccctctt cggaagaagg cgctacgtgc ccgacctcaa cgcccgggtg 2340 aagagegtea gggaggeege ggagegeatg geetteaaca tgeeegteea gggeaeegee 2400 gccgacctca tgaagctcgc catggtgaag ctcttccccc gcctccggga gatgggggcc 2460 cgcatgctcc tccaggtcgc caacgagctc ctcctggagg ccccccaagc gcgggccgag 2520 gaggtggcgg ctttggccaa ggaggccatg gagaaggcct atcccctcgc cgtgcccctg 2580 gaggtggagg tggggatggg ggaggactgg ctttccgcca agggtcacca ccaccaccac 2640 2643 cac

<210> 2815

<211> 881

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2815

Met Gly Ala Asp Ile Gly Asp Leu Phe Glu Arg Glu Glu Val Glu Leu 1 5 10 15

Glu Tyr Phe Ser Gly Lys Lys Ile Ala Val Asp Ala Phe Asn Thr Leu  $20 \hspace{1cm} 25 \hspace{1cm} 30$ 

Tyr Gln Phe Ile Ser Ile Ile Arg Gln Pro Asp Gly Thr Pro Leu Lys 35 40 45

Asp Ser Gln Gly Arg Ile Thr Ser His Leu Ser Gly Ile Leu Tyr Arg 50 55 60

Val Ser Asn Met Val Glu Val Gly Ile Arg Pro Val Phe Val Phe Asp 65 70 75 80

Gly Glu Pro Pro Glu Phe Lys Lys Ala Glu Ile Glu Glu Arg Lys Lys

Arg	Arg	Ala	Glu 100	Ala	Glu	Glu	Met	Trp 105	Ile	Ala	Ala	Leu	Gln 110	Ala	Gly
Asp	Lys	Asp 115	Ala	Lys	Lys	Tyr	Ala 120	Gln	Ala	Ala	Gly	Arg 125	Val	Asp	Glu
Tyr	Ile 130	Val	Asp	Ser	Ala	Lys 135	Thr	Leu	Leu	Ser	Tyr 140	Met	Gly	Ile	Pro
Phe 145	Val	Asp	Ala	Pro	Ser 150	Glu	Gly	Glu	Ala	Gln 155	Ala	Ala	Tyr	Met	Ala 160
Ala	Lys	Gly	Asp	Val 165	Glu	Tyr	Thr	Gly	Ser 170	Gln	Asp	Tyr	Asp	Ser 175	Leu
Leu	Phe	Gly	Ser 180	Pro	Arg	Leu	Ala	Arg 185	Asn	Leu	Ala	Ile	Thr 190	Gly	Lys
Arg	Lys	Leu 195	Pro	Gly	Lys	Asn	Val 200	Tyr	Val	Asp	Val	Lys 205	Pro	Glu	Ile
Ile	Ile 210	Leu	Glu	Ser	Asn	Leu 215	Lys	Arg	Leu	Gly	Leu 220	Thr	Arg	Glu	Gln
Leu 225	Ile	Asp	Ile	Ala	Ile 230	Leu	Val	Gly	Thr	Asp 235	Tyr	Asn	Glu	Gly	Val 240
Lys	Gly	Val	Gly	Val 245	Lys	Lys	Ala	Leu	Asn 250	Tyr	Ile	Lys	Thr	Tyr 255	Gly
Asp	Ile	Phe	Arg 260	Ala	Leu	Lys	Ala	Leu 265	Lys	Val	Asn	Ile	Asp 270	His	Val
Glu	Glu	Ile 275	Arg	Asn	Phe	Phe	Leu 280	Asn	Pro	Pro	Val	Thr 285	Asp	Asp	Tyr
Arg	Ile 290	Glu	Phe	Arg	Glu	Pro 295	Asp	Phe	Glu	Lys	Ala 300	Ile	Glu	Phe	Leu
Cys 305	Glu	Glu	His	Asp	Phe 310	Ser	Arg	Glu	Arg	Val 315	Glu	Lys	Ala	Leu	Glu 320
Lys	Leu	Lys	Ala	Leu 325	Lys	Ser	Thr	Gln	Ala 330	Thr	Leu	Glu	Arg	Trp 335	Phe

Leu	Glu	Glu	Ala 340	Pro	Trp	Pro	Pro	Pro 345	Glu	Gly	Ala	Phe	Val 350	Gly	Phe
Val	Leu	Ser 355	Arg	Pro	Glu	Pro	Met 360	Trp	Ala	Glu	Leu	Lys 365	Ala	Leu	Ala
Ala	Cys 370	Arg	Gly	Gly	Arg	Val 375	His	Arg	Ala	Ala	Asp 380	Pro	Leu	Ala	Gly
Leu 385	Lys	Asp	Leu	Lys	Glu 390	Val	Arg	Gly	Leu	Leu 395	Ala	Lys	Asp	Leu	Ala 400
Val	Leu	Ala	Ser	Arg 405	Glu	Gly	Leu	Asp	Leu 410	Val	Pro	Gly	Asp	Asp 415	Pro
Met	Leu	Leu	Ala 420	Tyr	Leu	Leu	Gly	Pro 425	Ser	Asn	Thr	Thr	Pro 430	Glu	Gly
Val	Ala	Arg 435	Arg	Tyr	Gly	Ģly	Glu 440	Trp	Thr	Glu	Asp	Ala 445	Ala	His	Arg
Ala	Leu 450	Leu	Ser	Glu	Arg	Leu 455	His	Arg	Asn	Leu	Leu 460	Lys	Arg	Leu	Glu
Gly 465	Glu	Glu	Lys	Leu	Leu 470	Trp	Leu	Tyr	His	Glu 475	Val	Glu	Lys	Pro	Leu 480
Ser	Arg	Val	Leu	Ala 485	His	Met	Glu	Ala	Thr 490	Gly	Val	Arg	Leu	Asp 495	Val
Ala	Tyr	Leu	Gln 500	Ala	Leu	Ser	Leu	Glu 505	Leu	Ala	Glu	Glu	Ile 510	Arg	Arg
Leu	Glu	Glu 515	Glu	Val	Phe	Arg	Leu 520	Ala	Gly	His	Pro	Phe 525	Asn	Leu	Asn
Ser	Arg 530	Asp	Gln	Leu	Glu	Arg 535	Val	Leu	Phe	Asp	Glu 540	Leu	Arg	Leu	Pro
Ala 545	Leu	Lys	Lys	Thr	Lys 550	Lys	Thr	Gly	Lys	Arg 555	Ser	Thr	Ser	Ala	Ala 560
Val	Leu	Glu	Ala	Leu 565	Arg	Glu	Ala	His	Pro 570	Ile	Val	Glu	Lys	575	Leu
Gln	His	Arg	Glu 580	Leu	Thr	Lys	Leu	Lys 585	Asn	Thr	Tyr	Val	Asp 590	Pro	Leu

Pro	Ser	Leu 595	Val	His	Pro	Arg	600	GIÀ	Arg	Leu	HIS	605	Arg	Pne	Asn
Gln	Thr 610	Ala	Thr	Ala	Thr	Gly 615	Arg	Leu	Ser	Ser	Ser 620	Asp	Pro	Asn	Leu
Gln 625	Asn	Ile	Pro	Val	Arg 630	Thr	Pro	Leu	Gly	Gln 635	Arg	Ile	Arg	Arg	Ala 640
Phe	Val	Ala	Glu	Ala 645	Gly	Trp	Ala	Leu	Val 650	Ala	Leu	Asp	Tyr	Ser 655	Gln
Ile	Glu	Leu	Arg 660	Val	Leu	Ala	His	Leu 665	Ser	Gly	Asp	Glu	Asn 670	Leu	Ile
Arg	Val	Phe 675	Gln	Glu	Gly	Lys	Asp 680	Ile	His	Thr	Gln	Thr 685	Ala	Ser	Trp
Met	Phe 690	Gly	Val	Pro	Pro	Glu 695	Ala	Val	Asp	Pro	Leu 700	Met	Arg	Arg	Ala
Ala 705	Lys	Thr	Val	Asn	Phe 710	Gly	Val	Leu	Tyr	Gly 715	Met	Ser	Ala	His	Arg 720
Leu	Ser	Gln	Glu	Leu 725	Ala	Ile	Pro	Tyr	Glu 730	Glu	Ala	Val	Ala	Phe 735	Ile
Glu	Arg	Tyr	Phe 740	Gln	Ser	Phe	Pro	Lys 745	Val	Arg	Ala	Trp	Ile 750	Glu	Lys
Thr	Leu	Glu 755	Glu	Gly	Arg	Lys	Arg 760	Gly	Tyr	Val	Glu	Thr 765	Leu	Phe	Gly
Arg	Arg 770	Arg	Tyr	Val	Pro	Asp 775	Leu	Asn	Ala	Arg	Val 780	Lys	Ser	Val	Arg
Glu 785	Ala	Ala	Glu	Arg	Met 790	Ala	Phe	Asn	Met	Pro 795	Val	Gln	Gly	Thr	Ala 800
Ala	Asp	Leu	Met	Lys 805	Leu	Ala	Met	Val	Lys 810	Leu	Phe	Pro	Arg	Leu 815	Arg
Glu	Met	Gly	Ala 820	Arg	Met	Leu	Leu	Gln 825	Val	Ala	Asn	Glu	Leu 830	Leu	Leu
Glu	Ala	Pro	Gln	Ala	Arg	Ala	Glu	Glu	Val	Ala	Ala	Leu	Ala	Lys	Glu

840 845 835

Ala Met Glu Lys Ala Tyr Pro Leu Ala Val Pro Leu Glu Val Glu Val

Gly Met Gly Glu Asp Trp Leu Ser Ala Lys Gly His His His His His 875 870

His

<210> 2816

<211> 2619

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2816 atgggtgcgg atattggtga cctctttgag agggaagagg tcgagcttga gtacttctca ggaaagaaaa ttgccgttga tgctttcaac acgctatacc agttcatctc gataataagg 120 cagoctgacg gtacgccgtt aaaggactca cagggcagaa tcacctctca cctttccgga

atcctataca gagtctccaa catggtcgag gtgggaatca ggccggtgtt tgtattcgac

60

180

240

960

ggagagccac cggagttcaa gaaggctgaa attgaggaga ggaaaaaagag aagggctgag 300 360 gcagaggaga tgtggattgc ggctttgcag gcaggagata aggacgcgaa aaagtatgct

420 caggetgeag ggagggttga cgagtacatt gttgactecg caaagacget tttaagttac

atggggattc cctttgtcga tgccccgtct gaaggagagg cgcaggctgc ttacatggca 480 gcaaaaggcg atgtggagta cacaggaagc caggattacg attctctgct cttcggaagc 540

600 ccgagactcg ccagaaatct cgcaataacg ggaaaaagga agcttcccgg caaaaatgtc

660 tatgtggatg taaagccgga gataataatt ctggaaagca acctcaaaag gctgggtttg

720 acgagggagc agetcatega catagegatt etggteggga eggactacaa tgagggtgtg

780 aagggtgtcg gcgtcaagaa ggctttgaac tacatcaaga cctacggaga tattttcagg

gcactcaagg ctctgaaagt aaatattgac cacgtagagg agataaggaa tttcttcctg 840

aatcctcctg tgactgacga ctacagaata gaqttcaqqq agcctgactt tgagaaggcc 900

atcgagttcc tgtgcgagga gcacgacttc agcagggaga gggtcgagaa ggccttggag

aagctcaaag	ctctgaagtc	aaccctggag	gaggccccct	ggccccgcc	ggaaggggcc	1020
ttcgtgggct	tcgtcctctc	ccgccccgag	cccatgtggg	cggagcttaa	agccctggcc	1080
gcctgcaggg	gcggccgcgt	gcaccgggca	gcagacccct	tggcggggct	aaaggacctc	1140
aaggaggtcc	ggggcctcct	cgccaaggac	ctcgccgtct	tggcctcgag	ggaggggcta	1200
gacctcgtgc	ccggggacga	ccccatgctc	ctcgcctacc	tcctgggccc	ctcgaacacc	1260
acccccgagg	gggtggcgcg	gcgctacggg	ggggagtgga	cggaggacgc	cgcccaccgg	1320
gccctcctct	cggagaggct	ccatcggaac	ctccttaagc	gcctcgaggg	ggaggagaag	1380
ctcctttggc	tctaccacga	ggtggaaaag	ccctctccc	gggtcctggc	ccatatggag	1440
gccaccgggg	tacggctgga	cgtggcctac	cttcaggccc	tttccctgga	gcttgcggag	1500
gagatccgcc	gcctcgagga	ggaggtcttc	cgcttggcgg	gccacccctt	caacctcaac	1560
tcccgggacc	agctggaaag	ggtgctcttt	gacgagctta	ggcttcccgc	cttgaagaag	1620
acgaagaaga	caggcaagcg	ctccaccagc	gccgcggtgc	tggaggccct	acgggaggcc	1680
caccccatcg	tggagaagat	cctccagcac	cgggagctca	ccaagctcaa	gaacacctac	1740
gtggaccccc	tcccaagcct	cgtccacccg	aggacgggcc	gcctccacac	ccgcttcaac	1800
cagacggcca	cggccacggg	gaggcttagt	agctccgacc	ccaacctgca	gaacatcccc	1860
gtccgcaccc	ccttgggcca	gaggatccgc	cgggccttcg	tggccgaggc	gggttgggcg	1920
ttggtggccc	tggactatag	ccagatagag	ctccgcgtcc	tcgcccacct	ctccggggac	1980
gaaaacctga	tcagggtctt	ccaggagggg	aaggacatcc	acacccagac	cgcaagctgg	2040
atgttcggcg	tccccccgga	ggccgtggac	cccctgatgc	gccgggcggc	caagacggtg	2100
aacttcggcg	tcctctacgg	catgtccgcc	cataggctct	cccaggagct	tgccatcccc	2160
tacgaggagg	cggtggcctt	tatagagcgc	tacttccaaa	gcttccccaa	ggtgcgggcc	2220
tggatagaaa	agaccctgga	ggaggggagg	aagcggggct	acgtggaaac	cctcttcgga	2280
agaaggcgct	acgtgcccga	cctcaacgcc	cgggtgaaga	gcgtcaggga	ggccgcggag	2340
cgcatggcct	tcaacatgcc	cgtccagggc	accgccgccg	acctcatgaa	gctcgccatg	2400
gtgaagctct	tcccccgcct	ccgggagatg	ggggcccgca	tgctcctcca	ggtcgccaac	2460
gagctcctcc	tggaggcccc	ccaagcgcgg	gccgaggagg	tggcggcttt	ggccaaggag	2520
gccatggaga	aggcctatcc	cctcgccgtg	cccctggagg	tggaggtggg	gatgggggag	2580
gactggcttt	ccgccaaggg	tcaccaccac	caccaccac			2619

<sup>&</sup>lt;210> 2817

<sup>&</sup>lt;211> 873

<sup>&</sup>lt;212> PRT

## <213> Artificial Sequence

<220>

<223> Synthetic

<400> 2817

Met Gly Ala Asp Ile Gly Asp Leu Phe Glu Arg Glu Glu Val Glu Leu 1 5 10 15

Glu Tyr Phe Ser Gly Lys Lys Ile Ala Val Asp Ala Phe Asn Thr Leu 20 25 30

Tyr Gln Phe Ile Ser Ile Ile Arg Gln Pro Asp Gly Thr Pro Leu Lys 35 40 45

Asp Ser Gln Gly Arg Ile Thr Ser His Leu Ser Gly Ile Leu Tyr Arg 50 55 60

Val Ser Asn Met Val Glu Val Gly Ile Arg Pro Val Phe Val Phe Asp 65 70 75 80

Gly Glu Pro Pro Glu Phe Lys Lys Ala Glu Ile Glu Glu Arg Lys Lys 85 90 95

Arg Arg Ala Glu Ala Glu Glu Met Trp Ile Ala Ala Leu Gln Ala Gly
100 105 110

Asp Lys Asp Ala Lys Lys Tyr Ala Gln Ala Ala Gly Arg Val Asp Glu 115 120 125

Tyr Ile Val Asp Ser Ala Lys Thr Leu Leu Ser Tyr Met Gly Ile Pro 130 135 140

Phe Val Asp Ala Pro Ser Glu Gly Glu Ala Gln Ala Ala Tyr Met Ala 145 150 155 160

Ala Lys Gly Asp Val Glu Tyr Thr Gly Ser Gln Asp Tyr Asp Ser Leu 165 170 175

Leu Phe Gly Ser Pro Arg Leu Ala Arg Asn Leu Ala Ile Thr Gly Lys 180 185 190

Arg Lys Leu Pro Gly Lys Asn Val Tyr Val Asp Val Lys Pro Glu Ile 195 200 205

Ile	Ile 210	Leu	Glu	Ser	Asn	Leu 215	Lys	Arg	Leu	Gly	Leu 220	Thr	Arg	Glu	Gln
Leu 225	Ile	Asp	Ile	Ala	Ile 230	Leu	Val	Gly	Thr	Asp 235	Tyr	Asn	Glu	Gly	Val 240
Lys	Gly	Val	Gly	Val 245	Lys	Lys	Ala	Leu	Asn 250	Tyr	Ile	Lys	Thr	Tyr 255	Gly
Asp	Ile	Phe	Arg 260	Ala	Leu	Lys	Ala	Leu 265	Lys	Val	Asn	Ile	Asp 270	His	Val
Glu	Glu	Ile 275	Arg	Asn	Phe	Phe	Leu 280	Asn	Pro	Pro	Val	Thr 285	Asp	Asp	Tyr
Arg	Ile 290	Glu	Phe	Arg	Glu	Pro 295	Asp	Phe	Glu	Lys	Ala 300	Ile	Glu	Phe	Leu
Cys 305	Glu	Glu	His	Asp	Phe 310	Ser	Arg	Glu	Arg	Val 315	Glu	Lys	Ala	Leu	Glu 320
Lys	Leu	Lys	Ala	Leu 325	Lys	Ser	Thr	Leu	Glu 330	Glu	Ala	Pro	Trp	Pro 335	Pro
Pro	Glu	Gly	Ala 340	Phe	Val	Gly	Phe	Val 345	Leu	Ser	Arg	Pro	Glu 350	Pro	Met
Trp	Ala	Glu 355	Leu	Lys	Ala	Leu	Ala 360	Ala	Cys	Arg	Gly	Gly 365	Arg	Val	His
Arg	Ala 370	Ala	Asp	Pro	Leu	Ala 375	Gly	Leu	Lys	Asp	Leu 380	Lys	Glu	Val	Arg
Gly 385	Leu	Leu	Ala	Lys	Asp 390	Leu	Ala	Val	Leu	Ala 395	Ser	Arg	Glu	Gly	Leu 400
Asp	Leu	Val	Pro	Gly 405	Asp	Asp	Pro	Met	Leu 410	Leu	Ala	Tyr	Leu	Leu 415	Gly
Pro	Ser	Asn	Thr 420	Thr	Pro	Glu	Gly	Val 425	Ala	Arg	Arg	Tyr	Gly 430	Gly	Glu
Trp	Thr	Glu 435	Asp	Ala	Ala	His	Arg 440	Ala	Leu	Leu	Ser	Glu 445	Arg	Leu	His
Arg	Asn	Leu	Leu	Lys	Arg	Leu 455	Glu	Gly	Glu	Glu	Lys	Leu	Leu	Trp	Leu

Tyr 465	His	Glu	Val	Glu	Lys 470	Pro	Leu	Ser	Arg	Val 475	Leu	Ala	His	Met	Glu 480
Ala	Thr	Gly	Val	Arg 485	Leu	Asp	Val	Ala	Tyr 490	Leu	Gln	Ala	Leu	Ser 495	Leu
Glu	Leu	Ala	Glu 500	Glu	Ile	Arg	Arg	Leu 505	Glu	Glu	Glu	Val	Phe 510	Arg	Leu
Ala	Gly	His 515	Pro	Phe	Asn	Leu	Asn 520	Ser	Arg	Asp	Gln	Leu 525	Glu	Arg	Val
Leu	Phe 530	Asp	Glu	Leu	Arg	Leu 535	Pro	Ala	Leu	Lys	Lys 540	Thr	Lys	Lys	Thr
Gly 545	Lys	Arg	Ser	Thr	Ser 550	Ala	Ala	Val	Leu	Glu 555	Ala	Leu	Arg	Glu	Ala 560
His	Pro	Ile	Val	Glu 565	Lys	Ile	Leu	Gln	His 570	Arg	Glu	Leu	Thr	Lys 575	Leu
Lys	Asn	Thr	Tyr 580	Val	Asp	Pro	Leu	Pro 585	Ser	Leu	Val	His	Pro 590	Arg	Thr
Gly	Arg	Leu 595	His	Thr	Arg	Phe	Asn 600	Gln	Thr	Ala	Thr	Ala 605	Thr	Gly	Arg
Leu	Ser 610	Ser	Ser	Asp	Pro	Asn 615	Leu	Gln	Asn	Ile	Pro 620	Val	Arg	Thr	Pro
Leu 625	Gly	Gln	Arg	Ile	Arg 630	Arg	Ala	Phe	Val	Ala 635	Glu	Ala	Gly	Trp	Ala 640
Leu	Val	Ala	Leu	Asp 645	Tyr	Ser	Gln	Ile	Glu 650	Leu	Arg	Val	Leu	Ala 655	His
Leu	Ser	Gly	Asp 660	Glu	Asn	Leu	Ile	Arg 665	Val	Phe	Gln	Glu	Gly 670	Lys	Asp
Ile	His	Thr 675	Gln	Thr	Ala	Ser	Trp 680	Met	Phe	Gly	Val	Pro 685	Pro	Glu	Ala
Val	Asp 690	Pro	Leu	Met	Arg	Arg 695	Ala	Ala	Lys	Thr	Val 700	Asn	Phe	Gly	Val
Leu	Tyr	Gly	Met	Ser	Ala	His	Arg	Leu	Ser	Gln	Glu	Leu	Ala	Ile	Pro

Tyr Glu Glu Ala Val Ala Phe Ile Glu Arg Tyr Phe Gln Ser Phe Pro 730

Lys Val Arg Ala Trp Ile Glu Lys Thr Leu Glu Glu Gly Arg Lys Arg

Gly Tyr Val Glu Thr Leu Phe Gly Arg Arg Arg Tyr Val Pro Asp Leu 760

Asn Ala Arg Val Lys Ser Val Arg Glu Ala Ala Glu Arg Met Ala Phe

Asn Met Pro Val Gln Gly Thr Ala Ala Asp Leu Met Lys Leu Ala Met 795

Val Lys Leu Phe Pro Arg Leu Arg Glu Met Gly Ala Arg Met Leu Leu 805 815

Gln Val Ala Asn Glu Leu Leu Glu Ala Pro Gln Ala Arg Ala Glu 820

Glu Val Ala Ala Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro Leu 835 840

Ala Val Pro Leu Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu Ser 850

Ala Lys Gly His His His His His 870

<210> 2818

<211> 2445

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2818

atgaattccc tgcccctctt tgagcccaag ggccgggtgc ttctggtgga cggccaccac 120

60

ctggcctacc gtaccttttt tgccctgaag ggcctcacca ccagccgcgg ggagccggtc

caggcggtgt acgggtttgc caagagcctt ttgaaggcgc taagggaaga cggggatgtg 180 gtgatcgtgg tgtttgacgc caaggccccc tccttccgcc accagaccta cgaggcctac 240 aaggcggggc gggctcccac ccccgaggac tttccccggc agcttgccct tatcaaggag 300 atggtggacc ttttgggcct ggagcgcctc gaggtgccgg gctttgaagc ggatgacgtc 360 420 ctggctaccc tggccaagaa ggcggaaaag gagggctacg aggtccgcat cctcaccgcc gacaaagacc tttaccagct cctttccgac cgcatccacg tcctccaccc cgaggggtac 480 540 ctcatcaccc cggcctggct ttgggaaaag tacggcctga ggcccgacca gtgggccgac 600 taccgggccc tgaccgggga cgagtccgac aaccttcccg gggtcaaggg catcggggag 660 aagacggcga ggaagettet ggaggagtgg gggageetgg aageeeteet caagaacetg 720 gaccggctga agcccgccat ccgggagaag atcctggccc acatggacga tctgaagctc 780 tectgggace tggccaaggt gegeacegae etgeceetgg aggtggaett egecaaaagg 840 cgggagcccg accgggaggg ggagaagccc cgggaggagg ccccctggcc cccgcccgaa 900 ggggccttcg tgggcttcct cctttcccgc cccgagccca tgtgggcgga gcttaaagcc 960 ctggccgcct gcaggggcgg ccgcgtgcac cgggcagcag accccttggc ggggctaaag 1020 gaceteaagg aggteegggg ceteetegee aaggaceteg eegtettgge etegagggag 1080 gggctagacc tcgtgcccgg ggacgacccc atgctcctcg cctacctcct gggcccctcg aacaccaccc ccgagggggt ggcgcggcgc tacggggggg agtggacgga ggacgccgcc 1140 caccgggccc tcctctcgga gaggctccat cggaacctcc ttaagcgcct cgagggggag 1200 gagaagetee tttggeteta ceacgaggtg gaaaageeee tetecegggt cetggeecat 1260 atggaggcca ccggggtacg gctggacgtg gcctaccttc aggccctttc cctggagctt 1320 geggaggaga teegeegeet egaggaggag gtetteeget tggegggeea eeeetteaae 1380 ctcaactccc gggaccagct ggaaagggtg ctctttgacg agcttaggct tcccgccttg 1440 aagaagacga agaagacagg caagcgctcc accagcgccg cggtgctgga ggccctacgg 1500 gaggcccacc ccatcgtgga gaagatcctc cagcaccggg agctcaccaa gctcaagaac 1560 acctacgtgg acccctccc aagcctcgtc cacccgagga cgggccgcct ccacacccgc 1620 1680 ttcaaccaga cggccacggc cacggggagg cttagtagct ccgaccccaa cctgcagaac 1740 atccccgtcc gcacccctt gggccagagg atccgccggg ccttcgtggc cgaggcgggt 1800 tgggcgttgg tggccctgga ctatagccag atagagctcc gcgtcctcgc ccacctctcc ggggacgaaa acctgatcag ggtcttccag gaggggaagg acatccacac ccagaccgca 1860 1920 agetggatgt teggegteee eeeggaggee gtggaceeee tgatgegeeg ggeggeeaag 1980 acggtgaact tcggcgtcct ctacggcatg tccgcccata ggctctccca ggagcttgcc

atcccctacg aggaggcggt ggcctttata gagcgctact tccaaagctt ccccaaggtg 2040 cgggcctgga tagaaaagac cctggaggag gggaggaagc ggggctacgt ggaaaccctc 2100 ttcggaagaa ggcgctacgt gcccgacctc aacgcccggg tgaagagcgt cagggaggcc 2160 geggagegea tggcetteaa catgecegte cagggeaceg cegeegacet catgaagete 2220 2280 gccatggtga agetettece eegeeteegg gagatggggg eeegeatget eeteeaggte gccaacgagc tcctcctgga ggccccccaa gcgcgggccg aggaggtggc ggctttggcc 2340 2400 aaqqaqqcca tqqaqaaqqc ctatcccctc gccgtgcccc tggaggtgga ggtggggatg 2445 ggggaggact ggctttccgc caagggtcac caccaccacc accac

<210> 2819

<211> 815

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2819

Met Asn Ser Leu Pro Leu Phe Glu Pro Lys Gly Arg Val Leu Leu Val 1 5 10 15

Asp Gly His His Leu Ala Tyr Arg Thr Phe Phe Ala Leu Lys Gly Leu 20 25 30

Thr Thr Ser Arg Gly Glu Pro Val Gln Ala Val Tyr Gly Phe Ala Lys 35 40 45

Ser Leu Leu Lys Ala Leu Arg Glu Asp Gly Asp Val Val Ile Val Val 50 60

Phe Asp Ala Lys Ala Pro Ser Phe Arg His Gln Thr Tyr Glu Ala Tyr 65 70 75 80

Lys Ala Gly Arg Ala Pro Thr Pro Glu Asp Phe Pro Arg Gln Leu Ala 85 90 95

Leu Ile Lys Glu Met Val Asp Leu Leu Gly Leu Glu Arg Leu Glu Val
100 105 110

Pro Gly Phe Glu Ala Asp Asp Val Leu Ala Thr Leu Ala Lys Lys Ala

Glu	Lys 130	Glu	Gly	Tyr	Glu	Val 135	Arg	Ile	Leu	Thr	Ala 140	Asp	Lys	Asp	Leu
Tyr 145	Gln	Leu	Leu	Ser	Asp 150	Arg	Ile	His	Val	Leu 155	His	Pro	Glu	Gly	Tyr 160
Leu	Ile	Thr	Pro	Ala 165	Trp	Leu	Trp	Glu	Lys 170	Tyr	Gly	Leu	Arg	Pro 175	Asp
Gln	Trp	Ala	Asp 180	Tyr	Arg	Ala	Leu	Thr 185	Gly	Asp	Glu	Ser	Asp 190	Asn	Leu
Pro	Gly	Val 195	Lys	Gly	Ile	Gly	Glu 200	_	Thr	Ala	Arg	Lys 205	Leu	Leu	Glu
Glu	Trp 210	Gly	Ser	Leu	Glu	Ala 215	Leu	Leu	Lys	Asn	Leu 220	Asp	Arg	Leu	Lys
Pro 225	Ala	Ile	Arg	Glu	Lys 230	Ile	Leu	Ala	His	Met 235	Asp	Asp	Leu	Lys	Leu 240
Ser	Trp	Asp	Leu	Ala 245	Lys	Val	Arg	Thr	Asp 250	Leu	Pro	Leu	Glu	Val 255	Asp
Phe	Ala	Lys	Arg 260	Arg	Glu	Pro	Asp	Arg 265	Glu	Gly	Glu	Lys	Pro 270	Arg	Glu
Glu	Ala	Pro 275	Trp	Pro	Pro	Pro	Glu 280	Gly	Ala	Phe	Val	Gly 285	Phe	Leu	Leu
Ser	Arg 290	Pro	Glu	Pro	Met	Trp 295	Ala	Glu	Leu	Lys	Ala 300	Leu	Ala	Ala	Cys
Arg 305	Gly	Gly	Arg	Val	His 310	Arg	Ala	Ala	Asp	Pro 315	Leu	Ala	Gly	Leu	Lys 320
Asp	Leu	Lys	Glu	Val 325	Arg	Gly	Leu	Leu	Ala 330	Lys	Asp	Leu	Ala	Val 335	Leu
Ala	Ser	Arg	Glu 340	Gly	Leu	Asp	Leu	Val 345	Pro	Gly	Asp	Asp	Pro 350	Met	Leu

Arg	Arg 370	Tyr	Gly	Gly	Glu	Trp 375	Thr	Glu	Asp	Ala	Ala 380	His	Arg	Ala	Leu
Leu 385	Ser	Glu	Arg	Leu	His 390	Arg	Asn	Leu	Leu	Lys 395	Arg	Leu	Glu	Gly	Glu 400
Glu	Lys	Leu	Leu	Trp 405	Leu	Tyr	His	Glu	Val 410	Glu	Lys	Pro	Leu	Ser 415	Arg
Val	Leu	Ala	His 420	Met	Glu	Ala	Thr	Gly 425	Val	Arg	Leu	Asp	Val 430	Ala	Tyr
Leu	Gln	Ala 435	Leu	Ser	Leu	Glu	Leu 440	Ala	Glu	Glu	Ile	Arg 445	Arg	Leu	Glu
Glu	Glu 450	Val	Phe	Arg	Leu	Ala 455	Gly	His	Pro	Phe	Asn 460	Leu	Asn	Ser	Arg
Asp 465	Gln	Leu	Glu	Arg	Val 470	Leu	Phe	Asp	Glu	Leu 475	Arg	Leu	Pro	Ala	Leu 480
Lys	Lys	Thr	Lys	Lys 485	Thr	Gly	Lys	Arg	Ser 490	Thr	Ser	Ala	Ala	Val 495	Leu
Glu	Ala	Leu	Arg 500	Glu	Ala	His	Pro	Ile 505	Val	Glu	Lys	Ile	Leu 510	Gln	His
Arg	Glu	Leu 515	Thr	Lys	Leu	Lys	Asn 520	Thr	Tyr	Val	Asp	Pro 525	Leu	Pro	Ser
Leu	Val 530	His	Pro	Arg	Thr	Gly 535	Arg	Leu	His	Thr	Arg 540	Phe	Asn	Gln	Thr
Ala 545	Thr	Ala	Thr	Gly	Arg 550	Leu	Ser	Ser	Ser	Asp 555	Pro	Asn	Leu	Gln	Asn 560
Ile	Pro	Val	Arg	Thr 565	Pro	Leu	Gly	Gln	Arg 570	Ile	Arg	Arg	Ala	Phe 575	Val
Ala	Glu	Ala	Gly 580	Trp	Ala	Leu	Val	Ala 585	Leu	Asp	Tyr	Ser	Gln 590	Ile	Glu
Leu	Arg	Val 595	Leu	Ala	His	Leu	Ser 600	Gly	Asp	Glu	Asn	Leu 605	Ile	Arg	Val
Phe	Gln 610	Glu	Gly	Lys	Asp	Ile 615	His	Thr	Gln	Thr	Ala 620	Ser	Trp	Met	Phe

Gly Val Pro Pro Glu Ala Val Asp Pro Leu Met Arg Arg Ala Ala Lys 625 630 635 Thr Val Asn Phe Gly Val Leu Tyr Gly Met Ser Ala His Arg Leu Ser Gln Glu Leu Ala Ile Pro Tyr Glu Glu Ala Val Ala Phe Ile Glu Arg Tyr Phe Gln Ser Phe Pro Lys Val Arg Ala Trp Ile Glu Lys Thr Leu 680 Glu Glu Gly Arg Lys Arg Gly Tyr Val Glu Thr Leu Phe Gly Arg Arg Arg Tyr Val Pro Asp Leu Asn Ala Arg Val Lys Ser Val Arg Glu Ala 705 710 715 720 Ala Glu Arg Met Ala Phe Asn Met Pro Val Gln Gly Thr Ala Ala Asp 725 Leu Met Lys Leu Ala Met Val Lys Leu Phe Pro Arg Leu Arg Glu Met 740 Gly Ala Arg Met Leu Leu Gln Val Ala Asn Glu Leu Leu Leu Glu Ala 755 760 Pro Gln Ala Arg Ala Glu Glu Val Ala Ala Leu Ala Lys Glu Ala Met 770 Glu Lys Ala Tyr Pro Leu Ala Val Pro Leu Glu Val Glu Val Gly Met 790 Gly Glu Asp Trp Leu Ser Ala Lys Gly His His His His His 805 <210> 2820 <211> 2520

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2820 60 atgaattccg aggcgatgct tccgctcttt gaacccaaag gccgggtcct cctggtggac ggccaccacc tggcctaccg caccttcttc gccctgaagg gcctcaccac gagccggggc 120 180 gaaccggtgc aggcggtcta cggcttcgcc aagagcctcc tcaaggccct caaggaggac 240 ggggacgcgg tgatcgtggt ctttgacgcc aaggccccct ccttccgcca cgaggcctac 300 ggggggtaca aggcgggccg ggcccccacc ccggaggact tcccccgcca gctcgccttg 360 gtcaagcggc tggtggacct tctgggcctg gtccgcctcg aggccccggg gtacgaggcg 420 gacgacgtcc tgggcaccct ggccaagaag gccgaaaagg aggggtacga ggtgcgcatc ctcaccgccg accgcgacct ctaccaactc gtctccgacc gcatccacgt cctccacccc 480 540 gaggggtacc tcatcaccc ggagtggctt tgggagaagt atgggcttaa gccttcccag tgggtggact accgggcctt ggccggggac ccttccgaca acatccccgg cgtgaagggc 600 660 atcggggaga agacggcggc caagctgatc cgggagtggg gaagcctgga aaacctcctc 720 aagaacctgg accggctgaa gcccgccatc cgggagaaga tcctggccca catggacgat ctgaagetet eetgggaeet ggeeaaggtg egeaeegaee tgeeeetgga ggtggaette 780 gccaaaaggc gggagcccga ccgggagagg cttagggcct ttctggagag gcttgagttt 840 900 ggcagcctcc tccacgagtt cggccttctg gaaagcccca aggccctgga ggaggccccc 960 tggcccccgc cggaaggggc cttcgtgggc ttcgtcctct cccgccccga gcccatgtgg 1020 geggagetta aageeetgge egeetgeagg ggeggeegeg tgeaceggge ageagaceee ttggcggggc taaaggacct caaggaggtc cggggcctcc tcgccaagga cctcgccgtc 1080 ttggcctcga gggaggggct agacctcgtg cccggggacg accccatgct cctcgcctac 1140 1200 ctcctgggcc cctcgaacac caccccgag ggggtggcgc ggcgctacgg gggggagtgg acggaggacg ccgcccaccg ggccctcctc tcggagaggc tccatcggaa cctccttaag 1260 1320 cgcctcgagg gggaggagaa gctcctttgg ctctaccacg aggtggaaaa gccctctcc 1380 cgggtcctgg cccatatgga ggccaccggg gtacggctgg acgtggccta ccttcaggcc ettteeetgg agettgegga ggagateege egeetegagg aggaggtett eegettggeg 1440 1500 ggccacccct tcaacctcaa ctcccgggac cagctggaaa gggtgctctt tgacgagctt aggetteecg cettgaagaa gacgaagaag acaggeaage getecaceag egeegeggtg 1560 1620 ctggaggccc tacgggaggc ccaccccatc gtggagaaga tcctccagca ccgggagctc accaagetea agaacaceta egtggacece eteccaagee tegtecacee gaggaeggge 1680 cgcctccaca cccgcttcaa ccagacggcc acggccacgg ggaggcttag tagctccgac 1740 1800 cccaacctgc agaacatccc cgtccgcacc cccttgggcc agaggatccg ccgggccttc gtggccgagg cgggttgggc gttggtggcc ctggactata gccagataga gctccgcgtc 1860 ctcqcccacc tctccqqqqa cqaaaacctg atcagggtct tccaggaggg gaaggacatc 1920 1980 cacacccaga ccgcaagctg gatgttcggc gtcccccgg aggccgtgga cccctgatg cgccgggcgg ccaagacggt gaacttcggc gtcctctacg gcatgtccgc ccataggctc 2040 tcccaggage ttgccatcce ctacgaggag geggtggcct ttatagageg ctacttccaa 2100 2160 agetteecca aggtgeggge etggatagaa aagaceetgg aggaggggag gaagegggge tacqtqqaaa ccctcttcqq aaqaaggcgc tacgtgcccg acctcaacgc ccgggtgaag 2220 agegteaggg aggeegegga gegeatggee tteaacatge eegteeaggg caeegeegee 2280 gacctcatga agctcgccat ggtgaagctc ttcccccgcc tccgggagat gggggcccgc 2340 atgeteetee aggtegeeaa egageteete etggaggeee eecaagegeg ggeegaggag 2400 gtggcggctt tggccaagga ggccatggag aaggcctatc ccctcgccgt gcccctggag 2460 gtggaggtgg ggatgggga ggactggctt tccgccaagg gtcaccacca ccaccaccac 2520

<210> 2821

<211> 840

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2821

Met Asn Ser Glu Ala Met Leu Pro Leu Phe Glu Pro Lys Gly Arg Val 1 5 10 15

Leu Leu Val Asp Gly His His Leu Ala Tyr Arg Thr Phe Phe Ala Leu 20 25 30

Lys Gly Leu Thr Thr Ser Arg Gly Glu Pro Val Gln Ala Val Tyr Gly 35 40 45

Phe Ala Lys Ser Leu Leu Lys Ala Leu Lys Glu Asp Gly Asp Ala Val 50 55 60

Ile Val Val Phe Asp Ala Lys Ala Pro Ser Phe Arg His Glu Ala Tyr 65 70 75 80

Gly Gly Tyr Lys Ala Gly Arg Ala Pro Thr Pro Glu Asp Phe Pro Arg 85 90 95

Gln	Leu	Ala	Leu 100	Val	Lys	Arg	Leu	Val 105	Asp	Leu	Leu	Gly	Leu 110	Val	Arg
Leu	Glu	Ala 115	Pro	Gly	Tyr	Glu	Ala 120	Asp	Asp	Val	Leu	Gly 125	Thr	Leu	Ala
Lys	Lys 130	Ala	Glu	Lys	Glu	Gly 135	Tyr	Glu	Val	Arg	Ile 140	Leu	Thr	Ala	Asp
Arg 145	Asp	Leu	Tyr	Gln	Leu 150	Val	Ser	Asp	Arg	Ile 155	His	Val	Leu	His	Pro 160
Glu	Gly	Tyr	Leu	Ile 165	Thr	Pro	Glu	Trp	Leu 170	Trp	Glu	Lys	Tyr	Gly 175	Leu
Lys	Pro	Ser	Gln 180	Trp	Val	Asp	Tyr	Arg 185	Ala	Leu	Ala	Gly	Asp 190	Pro	Ser
Asp	Asn	Ile 195	Pro	Gly	Val	Lys	Gly 200	Ile	Gly	Glu	Lys	Thr 205	Ala	Ala	Lys
Leu	Ile 210	Arg	Glu	Trp	Gly	Ser 215	Leu	Glu	Asn	Leu	Leu 220	Lys	Asn	Leu	Asp
Arg 225	Leu	Lys	Pro	Ala	Ile 230	Arg	Glu	Lys	Ile	Leu 235	Ala	His	Met	Asp	Asp 240
Leu	Lys	Leu	Ser	Trp 245	Asp	Leu	Ala	Lys	Val 250	Arg	Thr	Asp	Leu	Pro 255	Leu
Glu	Val	Asp	Phe 260	Ala	Lys	Arg	Arg	Glu 265	Pro	Asp	Arg	Glu	Arg 270	Leu	Arg
Ala	Phe	Leu 275	Glu	Arg	Leu	Glu	Phe 280	Gly	Ser	Leu	Leu	His 285	Glu	Phe	Gly
Leu	Leu 290	Glu	Ser	Pro	Lys	Ala 295	Leu	Glu	Glu	Ala	Pro 300	Trp	Pro	Pro	Pro
Glu 305	Gly	Ala	Phe	Val	Gly 310	Phe	Val	Leu	Ser	Arg 315	Pro	Glu	Pro	Met	Trp 320
Ala	Glu	Leu	Lys	Ala 325	Leu	Ala	Ala	Cys	Arg 330	Gly	Gly	Arg	Val	His 335	Arg
Ala	Ala	Asp	Pro 340	Leu	Ala	Gly	Leu	Lys 345	Asp	Leu	Lys	Glu	Val 350	Arg	Gly

Leu	Leu	Ala 355	Lys	Asp	Leu	Ala	Val 360	Leu	Ala	Ser	Arg	Glu 365	Gly	Leu	Asp
Leu	Val 370	Pro	Gly	Asp	Asp	Pro 375	Met	Leu	Leu	Ala	Tyr 380	Leu	Leu	Gly	Pro
Ser 385	Asn	Thr	Thr	Pro	Glu 390	Gly	Val	Ala	Arg	Arg 395	Tyr	Gly	Gly	Glu	Trp 400
Thr	Glu	Asp	Ala	Ala 405	His	Arg	Ala	Leu	Leu 410	Ser	Glu	Arg	Leu	His 415	Arg
Asn	Leu	Leu	Lys 420	Arg	Leu	Glu	Gly	Glu 425	Glu	Lys	Leu	Leu	Trp 430	Leu	Tyr
His	Glu	Val 435	Glu	Lys	Pro	Leu	Ser 440	Arg	Val	Leu	Ala	His 445	Met	Glu	Ala
Thr	Gly 450	Val	Arg	Leu	Asp	Val 455	Ala	Tyr	Leu	Gln	Ala 460	Leu	Ser	Leu	Glu
Leu 465	Ala	Glu	Glu	Ile	Arg 470	Arg	Leu	Glu	Glu	Glu 475	Val	Phe	Arg	Leu	Ala 480
Gly	His	Pro	Phe	Asn 485	Leu	Asn	Ser	Arg	Asp 490	Gln	Leu	Glu	Arg	Val 495	Leu
Phe	Asp	Glu	Leu 500	Arg	Leu	Pro	Ala	Leu 505	Lys	Lys	Thr	Lys	Lys 510	Thr	Gly
Lys	Arg	Ser 515	Thr	Ser	Ala	Ala	Val 520	Leu	Glu	Ala	Leu	Arg 525	Glu	Ala	His
Pro	Ile 530	Val	Glu	Lys	Ile	Leu 535	Gln	His	Arg	Glu	Leu 540	Thr	Lys	Leu	Lys
Asn 545	Thr	Tyr	Val	Asp	Pro 550	Leu	Pro	Ser	Leu	Val 555	His	Pro	Arg	Thr	Gly 560
Arg	Leu	His	Thr	Arg 565	Phe	Asn	Gln	Thr	Ala 570	Thr	Ala	Thr	Gly	Arg 575	Leu
Ser	Ser	Ser	Asp 580	Pro	Asn	Leu	Gln	Asn 585	Ile	Pro	Val	Arg	Thr 590	Pro	Leu
Gly	Gln	Arg	Ile	Arg	Arg	Ala	Phe	Val	Ala	Glu	Ala	Gly	Trp	Ala	Leu

Val	Ala 610	Leu	Asp	Tyr	Ser	Gln 615	Ile	Glu	Leu	Arg	Val 620	Leu	Ala	His	Leu
Ser 625	Gly	Asp	Glu	Asn	Leu 630	Ile	Arg	Val	Phe	Gln 635	Glu	Gly	Lys	Asp	Ile 640
His	Thr	Gln	Thr	Ala 645	Ser	Trp	Met	Phe	Gly 650	Val	Pro	Pro	Glu	Ala 655	Val
Asp	Pro	Leu	Met 660	Arg	Arg	Ala	Ala	Lys 665	Thr	Val	Asn	Phe	Gly 670	Val	Leu
Tyr	Gly	Met 675	Ser	Ala	His	Arg	Leu 680	Ser	Gln	Glu	Leu	Ala 685	Ile	Pro	Tyr
Glu	Glu 690	Ala	Val	Ala	Phe	Ile 695	Glu	Arg	Tyr	Phe	Gln 700	Ser	Phe	Pro	Lys
Val 705	Arg	Ala	Trp	Ile	Glu 710	Lys	Thr	Leu	Glu	Glu 715	Gly	Arg	Lys	Arg	Gly 720
Tyr	Val	Glu	Thr	Leu 725	Phe	Gly	Arg	Arg	Arg 730	Tyr	Val	Pro	Asp	Leu 735	Asn
Ala	Arg	Val	Lys 740	Ser	Val	Arg	Glu	Ala 745	Ala	Glu	Arg	Met	Ala 750	Phe	Asn
Met	Pro	Val 755	Gln	Gly	Thr	Ala	Ala 760	Asp	Leu	Met	Lys	Leu 765	Ala	Met	Val
Lys	Leu 770	Phe	Pro	Arg	Leu	Arg 775	Glu	Met	Gly	Ala	Arg 780	Met	Leu	Leu	Gln
Val 785	Ala	Asn	Glu	Leu	Leu 790	Leu	Glu	Ala	Pro	Gln 795	Ala	Arg	Ala	Glu	Glu 800
Val	Ala	Ala	Leu	Ala 805	Lys	Glu	Ala	Met	Glu 810	Lys	Ala	Tyr	Pro	Leu 815	Ala
Val	Pro	Leu	Glu 820	Val	Glu	Val	Gly	Met 825	Gly	Glu	Asp	Trp	Leu 830	Ser	Ala

Lys Gly His His His His His His 835

<210> 2822

<211> 2445

<212> DNA

<213> Artificial Sequence

<220>

## <223> Synthetic

<400> 2822 60 atgaattccc tgcccctctt tgagcccaag ggccgggtgc ttctggtgga cggccaccac 120 ctggcctacc gtaccttttt tgccctgaag ggcctcacca ccagccgcgg ggagccggtc caggeggtgt aegggtttge caagageett ttgaaggege taagggaaga eggggatgtg 180 240 gtgatcgtgg tgtttgacgc caaggccccc tccttccgcc accagaccta cgaggcctac 300 aaggegggge gggeteecac eeeegaggae ttteeeegge agettgeeet tateaaggag atggtggacc ttttgggctt taccegcctc gaggtgccgg gctttgaagc ggatgacgtc 360 420 ctggctaccc tggccaagaa ggcggaaaag gagggctacg aggtccgcat cctcaccgcc 480 gacaaagacc tttaccagct cctttccgac cgcatccacg tcctccaccc cgaggggtac 540 ctcatcaccc cggcctggct ttgggaaaag tacggcctga ggcccgacca gtgggccgac 600 taccgggccc tgaccgggga cgagtccgac aaccttcccg gggtcaaggg catcggggag aagacggcga ggaagettet ggaggagtgg gggageetgg aageeeteet caagaacetg 660 720 gaccggctga agcccgccat ccgggagaag atcctggccc acatggacga tctgaagctc 780 tectgggace tggccaaggt gegcacegae etgeceetgg aggtggactt egecaaaagg cgggagcccg accgggaggg ggagaagccc cgggaggagg ccccctggcc cccgccgaa 840 900 ggggccttcg tgggcttcct cctttcccgc cccgagccca tgtgggcgga gcttaaagcc 960 etggeegeet geaggggegg eegegtgeac egggeageag acceettgge ggggetaaag 1020 gaceteaagg aggteegggg ceteetegee aaggaceteg eegtettgge etegagggag 1080 gggctagace tegtgeeegg ggaegacece atgeteeteg cetaceteet gggeeeeteg aacaccaccc ccgaggggt ggcgcggcgc tacgggggg agtggacgga ggacgccgcc 1140 1200 caccgggccc tcctctcgga gaggctccat cggaacctcc ttaagcgcct cgagggggag gagaagetee tttggeteta ceaegaggtg gaaaageeee teteeegggt eetggeeeat 1260 atggaggcca ccggggtacg gctggacgtg gcctaccttc aggccctttc cctggagctt 1320 geggaggaga teegeegeet egaggaggag gtetteeget tggegggeea eecetteaae 1380 ctcaactccc gggaccagct ggaaagggtg ctctttgacg agcttaggct tcccgccttg 1440

aaqaaqacqa aqaaqacaqq caaqcqctcc accagcgccg cggtgctgga ggccctacgg 1500 gaggeceace ceategtgga gaagateete cageaceggg ageteaceaa geteaagaac 1560 acctacgtgg accccctccc aagcctcgtc cacccgagga cgggccgcct ccacacccgc 1620 1680 ttcaaccaga cggccacggc cacggggagg cttagtagct ccgaccccaa cctgcagaac 1740 atcoccgtcc gcaccccctt gggccagagg atccgccggg ccttcgtggc cgaggcgggt tgggcgttgg tggccctgga ctatagccag atagagctcc gcgtcctcgc ccacctctcc 1800 ggggacgaaa acctgatcag ggtcttccag gaggggaagg acatccacac ccagaccgca 1860 agetggatgt teggegtece eeeggaggee gtggaceeee tgatgegeeg ggeggeeaag 1920 acggtgaact tcggcgtcct ctacggcatg tccgcccata ggctctccca ggagcttgcc 1980 2040 atcccctacg aggaggcggt ggcctttata gagcgctact tccaaagctt ccccaaggtg 2100 cgggcctgga tagaaaagac cctggaggag gggaggaagc ggggctacgt ggaaaccctc 2160 tteggaagaa ggegetaegt geeegaeete aacgeeeggg tgaagagegt cagggaggee 2220 geggagegea tygeetteaa catgecegte cagggeaceg cegeegacet catgaagete gccatggtga agetetteec eegeeteegg gagatggggg eeegeatget eeteeaggte 2280 gccaacqagc tectectgqa ggccccccaa gcgcgggccg aggaggtggc ggctttggcc 2340 aaggaggcca tggagaaggc ctatcccctc gccgtgcccc tggaggtgga ggtggggatg 2400 ggggaggact ggctttccgc caagggtcac caccaccacc accac 2445

<210> 2823

<211> 815

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2823

Met Asn Ser Leu Pro Leu Phe Glu Pro Lys Gly Arg Val Leu Leu Val 1 5 10 15

Asp Gly His His Leu Ala Tyr Arg Thr Phe Phe Ala Leu Lys Gly Leu 20 25 30

Thr Thr Ser Arg Gly Glu Pro Val Gln Ala Val Tyr Gly Phe Ala Lys 35 40 45

Ser	Leu 50	Leu	Lys	Ala	Leu	Arg 55	Glu	Asp	Gly	Asp	Val 60	Val	Ile	Val	Val
Phe 65	Asp	Ala	Lys	Ala	Pro 70	Ser	Phe	Arg	His	Gln 75	Thr	Tyr	Glu	Ala	Tyr 80
Lys	Ala	Gly	Arg	Ala 85	Pro	Thr	Pro	Glu	Asp 90	Phe	Pro	Arg	Gln	Leu 95	Ala
Leu	Ile	Lys	Glu 100	Met	Val	Asp	Leu	Leu 105	Gly	Phe	Thr	Arg	Leu 110	Glu	Val
Pro	Gly	Phe 115	Glu	Ala	Asp	Asp	Val 120	Leu	Ala	Thr	Leu	Ala 125	Lys	Lys	Ala
Glu	Lys 130	Glu	Gly	Tyr	Glu	Val 135	Arg	Ile	Leu	Thr	Ala 140	Asp	Lys	Asp	Leu
Tyr 145	Gln	Leu	Leu	Ser	Asp 150	Arg	Ile	His	Val	Leu 155	His	Pro	Glu	Gly	Tyr 160
Leu	Ile	Thr	Pro	Ala 165	Trp	Leu	Trp	Glu	Lys 170	Tyr	Gly	Leu	Arg	Pro 175	Asp
Gln	Trp	Ala	Asp 180	Tyr	Arg	Ala	Leu	Thr 185	Gly	Asp	Glu	Ser	Asp 190	Asn	Leu
Pro	Gly	Val 195	Lys	Gly	Ile	Gly	Glu 200	Lys	Thr	Ala	Arg	Lys 205	Leu	Leu	Glu
Glu	Trp 210	Gly	Ser	Leu	Glu	Ala 215	Leu	Leu	Lys	Asn	Leu 220	Asp	Arg	Leu	Lys
Pro 225	Ala	Ile	Arg	Glu	Lys 230	Ile	Leu	Ala	His	Met 235	Asp	Asp	Leu	Lys	Leu 240
Ser	Trp	Asp	Leu	Ala 245	Lys	Val	Arg	Thr	Asp 250	Leu	Pro	Leu	Glu	Val 255	Asp
Phe	Ala	Lys	Arg 260	Arg	Glu	Pro	Asp	Arg 265	Glu	Gly	Glu	Lys	Pro 270	Arg	Glu
Glu	Ala	Pro 275	Trp	Pro	Pro	Pro	Glu 280	Gly	Ala	Phe	Val	Gly 285	Phe	Leu	Leu
Ser	Arg 290	Pro	Glu	Pro	Met	Trp 295	Ala	Glu	Leu	Lys	Ala 300	Leu	Ala	Ala	Cys

Arg 305	Gly	Gly	Arg	Val	His 310	Arg	Ala	Ala	Asp	Pro 315	Leu	Ala	Gly	Leu	Lys 320
Asp	Leu	Lys	Glu	Val 325	Arg	Gly	Leu	Leu	Ala 330	Lys	Asp	Leu	Ala	Val 335	Leu
Ala	Ser	Arg	Glu 340	Gly	Leu	Asp	Leu	Val 345	Pro	Gly	Asp	Asp	Pro 350	Met	Leu
Leu	Ala	Tyr 355	Leu	Leu	Gly	Pro	Ser 360	Asn	Thr	Thr	Pro	Glu 365	Gly	Val	Ala
Arg	Arg 370	Tyr	Gly	Gly	Glu	Trp 375	Thr	Glu	Asp	Ala	Ala 380	His	Arg	Ala	Leu
Leu 385	Ser	Glu	Arg	Leu	His 390	Arg	Asn	Leu	Leu	Lys 395	Arg	Leu	Glu	Gly	Glu 400
Glu	Lys	Leu	Leu	Trp 405	Leu	Tyr	His	Glu	Val 410	Glu	Lys	Pro	Leu	Ser 415	Arg
Val	Leu	Ala	His 420	Met	Glu	Ala	Thr	Gly 425	Val	Arg	Leu	Asp	Val 430	Ala	Tyr
Leu	Gln	Ala 435	Leu	Ser	Leu	Glu	Leu 440	Ala	Glu	Glu	Ile	Arg 445	Arg	Leu	Glu
Glu	Glu 450	Val	Phe	Arg	Leu	Ala 455	Gly	His	Pro	Phe	Asn 460	Leu	Asn	Ser	Arg
Asp 465	Gln	Leu	Glu	Arg	Val 470	Leu	Phe	Asp	Glu	Leu 475	Arg	Leu	Pro	Ala	Leu 480
Lys	Lys	Thr	Lys	Lys 485	Thr	Gly	Lys	Arg	Ser 490	Thr	Ser	Ala	Ala	Val 495	Leu
Glu	Ala	Leu	Arg 500	Glu	Ala	His	Pro	Ile 505	Val	Glu	Lys	Ile	Leu 510	Gln	His
Arg	Glu	Leu 515	Thr	Lys	Leu	Lys	Asn 520	Thr	Tyr	Val	Asp	Pro 525	Leu	Pro	Ser
Leu	Val 530	His	Pro	Arg	Thr	Gly 535	Arg	Leu	His	Thr	Arg 540	Phe	Asn	Gln	Thr
Ala	Thr	Ala	Thr	Gly	Arg	Leu	Ser	Ser	Ser	Asp	Pro	Asn	Leu	Gl'n	Asn

Ile Pro Val Arg Thr Pro Leu Gly Gln Arg Ile Arg Arg Ala Phe Val 565 570 575

Ala Glu Ala Gly Trp Ala Leu Val Ala Leu Asp Tyr Ser Gln Ile Glu 580 585 590

Leu Arg Val Leu Ala His Leu Ser Gly Asp Glu Asn Leu Ile Arg Val 595 600 605

Phe Gln Glu Gly Lys Asp Ile His Thr Gln Thr Ala Ser Trp Met Phe 610 620

Gly Val Pro Pro Glu Ala Val Asp Pro Leu Met Arg Arg Ala Ala Lys 625 630 635

Thr Val Asn Phe Gly Val Leu Tyr Gly Met Ser Ala His Arg Leu Ser 645 650 655

Gln Glu Leu Ala Ile Pro Tyr Glu Glu Ala Val Ala Phe Ile Glu Arg 660 665 670

Tyr Phe Gln Ser Phe Pro Lys Val Arg Ala Trp Ile Glu Lys Thr Leu 675 680 685

Glu Glu Gly Arg Lys Arg Gly Tyr Val Glu Thr Leu Phe Gly Arg Arg 690 695 700

Arg Tyr Val Pro Asp Leu Asn Ala Arg Val Lys Ser Val Arg Glu Ala 705 710 715 720

Ala Glu Arg Met Ala Phe Asn Met Pro Val Gln Gly Thr Ala Ala Asp
725 730 735

Leu Met Lys Leu Ala Met Val Lys Leu Phe Pro Arg Leu Arg Glu Met 740 745 750

Gly Ala Arg Met Leu Leu Gln Val Ala Asn Glu Leu Leu Glu Ala 755 760 765

Pro Gln Ala Arg Ala Glu Glu Val Ala Ala Leu Ala Lys Glu Ala Met 770 780

Glu Lys Ala Tyr Pro Leu Ala Val Pro Leu Glu Val Glu Val Gly Met 785 790 795 800

## Gly Glu Asp Trp Leu Ser Ala Lys Gly His His His His His His 805 810 815

<210> 2824

<211> 2520

<212> DNA

<213> Artificial Sequence

<220>

## <223> Synthetic

<400> 2824 atgaattccg aggcgatgct tccgctcttt gaacccaaag gccgggtcct cctggtggac 60 ggccaccacc tggcctaccg caccttcttc gccctgaagg gcctcaccac gagccggggc 120 180 gaaccggtgc aggcggtcta cggcttcgcc aagagcctcc tcaaggccct caaggaggac 240 ggggacgcgg tgatcgtggt ctttgacgcc aaggccccct ccttccgcca cgaggcctac ggggggtaca aggcgggccg ggcccccacc ccggaggact tcccccgcca gctcgccttg 300 gtcaagcggc tggtggacct tctgggcttt acccgcctcg aggccccggg gtacgaggcg 360 gacgacgtcc tgggcaccct ggccaagaag gccgaaaagg aggggtacga ggtgcgcatc 420 ctcaccgccg accgcgacct ctaccaactc gtctccgacc gcatccacgt cctccacccc 480 gaggggtacc tcatcacccc ggagtggctt tgggagaagt atgggcttaa gccttcccag 540 600 tgggtggact accgggcctt ggccggggac ccttccgaca acatccccgg cgtgaagggc 660 ateggggaga agaeggegge caagetgate egggagtggg gaageetgga aaaceteete 720 aagaacctgg accggctgaa gcccgccatc cgggagaaga tcctggccca catggacgat 780 ctgaagetet cetgggacet ggecaaggtg cgcacegace tgeceetgga ggtggactte 840 gccaaaaggc gggagcccga ccgggagagg cttagggcct ttctggagag gcttgagttt 900 ggcagcctcc tccacgagtt cggccttctg gaaagcccca aggccctgga ggaggccccc 960 tggccccgc cggaagggc cttcgtggc ttcgtcctct cccgccccga gcccatgtgg geggagetta aageeetgge egeetgeagg ggeggeegeg tgeaceggge ageagaceee 1020 1080 ttggcggggc taaaggacct caaggaggtc cggggcctcc tcgccaagga cctcgccgtc ttggcctcga gggagggct agacctcgtg cccggggacg accccatgct cctcgcctac 1140 etectgggee cetegaacae cacceegag ggggtggege ggegetaegg gggggagtgg 1200 1260 acggaggacg ccgcccaccg ggccctcctc tcggagaggc tccatcggaa cctccttaag cgcctcgagg gggaggagaa gctcctttgg ctctaccacg aggtggaaaa gcccctctcc 1320

cgggtcctgg cccatatgga ggccaccggg gtacggctgg acgtggccta ccttcaggcc 1380 ctttccctgg agcttgcgga ggagatccgc cgcctcgagg aggaggtctt ccgcttggcg 1440 ggccacccct tcaacctcaa ctcccgggac cagctggaaa gggtgctctt tgacgagctt 1500 1560 aggetteecq cettqaaqaa qacgaaqaag acaggcaage geteeaccag egeegeggtg 1620 ctggaggccc tacgggaggc ccaccccatc gtggagaaga tcctccagca ccgggagctc accaagetea agaacaceta egtggacece eteccaagee tegtecacee gaggacggge 1680 1740 cgcctccaca cccgcttcaa ccagacggcc acggccacgg ggaggcttag tagctccgac 1800 cccaacctgc agaacatccc cgtccgcacc cccttgggcc agaggatccg ccgggccttc 1860 gtggccgagg cgggttgggc gttggtggcc ctggactata gccagataga gctccgcgtc 1920 ctcgcccacc tctccgggga cgaaaacctg atcagggtct tccaggaggg gaaggacatc 1980 cacacccaga ccgcaagctg gatgttcggc gtccccccgg aggccgtgga ccccctgatg 2040 cgccgggcgg ccaagacggt gaacttcggc gtcctctacg gcatgtccgc ccataggctc 2100 tcccaggagc ttgccatccc ctacgaggag gcggtggcct ttatagagcg ctacttccaa 2160 agcttcccca aggtgcgggc ctggatagaa aagaccctgg aggaggggag gaagcggggc tacgtggaaa ccctcttcgg aagaaggcgc tacgtgcccg acctcaacgc ccgggtgaag 2220 2280 agcqtcagqq aggccqcqqa gcqcatqqcc ttcaacatgc ccgtccaggg caccgccgcc gacctcatga agctcgccat ggtgaagctc ttcccccgcc tccgggagat gggggcccgc 2340 atgetectee aggtegeeaa egageteete etggaggeee eecaagegeg ggeegaggag 2400 gtggcggctt tggccaagga ggccatggag aaggcctatc ccctcgccgt gcccctggag 2460 gtggaggtgg ggatggggga ggactggctt tccgccaagg gtcaccacca ccaccaccac 2520

<210> 2825

<211> 840

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2825

Met Asn Ser Glu Ala Met Leu Pro Leu Phe Glu Pro Lys Gly Arg Val 1 5 10 15

Leu Leu Val Asp Gly His His Leu Ala Tyr Arg Thr Phe Phe Ala Leu

30

Lys	Gly	Leu	Thr	Thr	Ser	Arg	Gly	Glu	Pro	Val	Gln	Ala	Val	Tyr	Gly
		35					40					45			

- Phe Ala Lys Ser Leu Leu Lys Ala Leu Lys Glu Asp Gly Asp Ala Val 50 55 60
- Ile Val Val Phe Asp Ala Lys Ala Pro Ser Phe Arg His Glu Ala Tyr 65 70 75 80
- Gly Gly Tyr Lys Ala Gly Arg Ala Pro Thr Pro Glu Asp Phe Pro Arg 85 90 95
- Gln Leu Ala Leu Val Lys Arg Leu Val Asp Leu Leu Gly Phe Thr Arg 100 105 110
- Leu Glu Ala Pro Gly Tyr Glu Ala Asp Asp Val Leu Gly Thr Leu Ala 115 120 125
- Lys Lys Ala Glu Lys Glu Gly Tyr Glu Val Arg Ile Leu Thr Ala Asp 130 135 140
- Arg Asp Leu Tyr Gln Leu Val Ser Asp Arg Ile His Val Leu His Pro 145 150 155 160
- Glu Gly Tyr Leu Ile Thr Pro Glu Trp Leu Trp Glu Lys Tyr Gly Leu 165 170 175
- Lys Pro Ser Gln Trp Val Asp Tyr Arg Ala Leu Ala Gly Asp Pro Ser 180 185 190
- Asp Asn Ile Pro Gly Val Lys Gly Ile Gly Glu Lys Thr Ala Ala Lys 195 200 205
- Leu Ile Arg Glu Trp Gly Ser Leu Glu Asn Leu Leu Lys Asn Leu Asp 210 215 220
- Arg Leu Lys Pro Ala Ile Arg Glu Lys Ile Leu Ala His Met Asp Asp 225 230 235 240
- Leu Lys Leu Ser Trp Asp Leu Ala Lys Val Arg Thr Asp Leu Pro Leu 245 250 255
- Glu Val Asp Phe Ala Lys Arg Arg Glu Pro Asp Arg Glu Arg Leu Arg 260 265 270

Ala	Phe	Leu 275	Glu	Arg	Leu	Glu	Phe 280	Gly	Ser	Leu	Leu	His 285	Glu	Phe	Gly
Leu	Leu 290	Glu	Ser	Pro	Lys	Ala 295	Leu	Glu	Glu	Ala	Pro 300	Trp	Pro	Pro	Pro
Glu 305	Gly	Ala	Phe	Val	Gly 310	Phe	Val	Leu	Ser	Arg 315	Pro	Glu	Pro	Met	Trp 320
Ala	Glu	Leu	Lys	Ala 325	Leu	Ala	Ala	Cys	Arg 330	Gly	Gly	Arg	Val	His 335	Arg
Ala	Ala	Asp	Pro 340	Leu	Ala	Gly	Leu	Lys 345	Asp	Leu	Lys	Glu	Val 350	Arg	Gly
Leu	Leu	Ala 355	Lys	Asp	Leu	Ala	Val 360	Leu	Ala	Ser	Arg	Glu 365	Gly	Leu	Asp
Leu	Val 370	Pro	Gly	Asp	Asp	Pro 375	Met	Leu	Leu	Ala	Tyr 380	Leu	Leu	Gly	Pro
Ser 385	Asn	Thr	Thr	Pro	Glu 390	Gly	Val	Ala	Arg	Arg 395	Tyr	Gly	Gly	Glu	Trp 400
Thr	Glu	Asp	Ala	Ala 405	His	Arg	Ala	Leu	Leu 410	Ser	Glu	Arg	Leu	His 415	Arg
Asn	Leu	Leu	Lys 420	Arg	Leu	Glu	Gly	Glu 425	Glu	Lys	Leu	Leu	Trp 430	Leu	Tyr
His	Glu	Val 435	Glu	Lys	Pro	Leu	Ser 440	Arg	Val	Leu	Ala	His 445	Met	Glu	Ala
Thr	Gly 450	Val	Arg	Leu	Asp	Val 455	Ala	Tyr	Leu	Gln	Ala 460	Leu	Ser	Leu	Glu
Leu 465	Ala	Glu	Glu	Ile	Arg 470	Arg	Leu	Glu	Glu	Glu 475	Val	Phe	Arg	Leu	Ala 480
Gly	His	Pro	Phe	Asn 485	Leu	Asn	Ser	Arg	Asp 490	Gln	Leu	Glu	Arg	Val 495	Leu
Phe	Asp	Glu	Leu 500	Arg	Leu	Pro	Ala	Leu 505	Lys	Lys	Thr	Lys	Lys 510	Thr	Gly
Lys	Arg	Ser 515	Thr	Ser	Ala	Ala	Val 520	Leu	Glu	Ala	Leu	Arg 525	Glu	Ala	His

Pro	Ile 530	Val	Glu	Lys	Ile	Leu 535	Gln	His	Arg	Glu	Leu 540	Thr	Lys	Leu	Lys
Asn 545	Thr	Tyr	Val	Asp	Pro 550	Leu	Pro	Ser	Leu	Val 555	His	Pro	Arg	Thr	Gly 560
Arg	Leu	His	Thr	Arg 565	Phe	Asn	Gln	Thr	Ala 570	Thr	Ala	Thr	Gly	Arg 575	Leu
Ser	Ser	Ser	Asp 580	Pro	Asn	Leu	Gln	Asn 585	Ile	Pro	Val	Arg	Thr 590	Pro	Leu
Gly	Gln	Arg 595	Ile	Arg	Arg	Ala	Phe 600	Val	Ala	Glu	Ala	Gly 605	Trp	Ala	Leu
Val	Ala 610	Leu	Asp	Tyr	Ser	Gln 615	Ile	Glu	Leu	Arg	Val 620	Leu	Ala	His	Leu
Ser 625	Gly	Asp	Glu	Asn	Leu 630	Ile	Arg	Val	Phe	Gln 635	Glu	Gly	Lys	Asp	Ile 640
His	Thr	Gln	Thr	Ala 645	Ser	Trp	Met	Phe	Gly 650	Val	Pro	Pro	Glu	Ala 655	Val
Asp	Pro	Leu	Met 660	Arg	Arg	Ala	Ala	Lys 665	Thr	Val	Asn	Phe	Gly 670	Val	Leu
Tyr	Gly	Met 675	Ser	Ala	His	Arg	Leu 680	Ser	Gln	Glu	Leu	Ala 685	Ile	Pro	Tyr
Glu	Glu 690	Ala	Val	Ala	Phe	Ile 695	Glu	Arg	Tyr	Phe	Gln 700	Ser	Phe	Pro	Lys
Val 705	Arg	Ala	Trp	Ile	Glu 710	Lys	Thr	Leu	Glu	Glu 715	Gly	Arg	Lys	Arg	Gly 720
Tyr	Val	Glu	Thr	Leu 725	Phe	Gly	Arg	Arg	Arg 730	Tyr	Val	Pro	Asp	Leu 735	Asn
Ala	Arg	Val	Lys 740	Ser	Val	Arg	Glu	Ala 745	Ala	Glu	Arg	Met	Ala 750	Phe	Asn
Met	Pro	Val 755	Gln	Gly	Thr	Ala	Ala 760	Asp	Leu	Met	Lys	Leu 765	Ala	Met	Val
Lys	Leu	Phe	Pro	Arg	Leu	Arg	Glu	Met	Gly	Ala	Arg	Met	Leu	Leu	Gln

770 775 780

Val Ala Asn Glu Leu Leu Leu Glu Ala Pro Gln Ala Arg Ala Glu Glu 785 790 795 800

Val Ala Ala Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro Leu Ala 805 810 815

Val Pro Leu Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu Ser Ala 820 825 830

Lys Gly His His His His His 835 840

<210> 2826

<211> 2445

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2826 atgaattccc

atgaatteee tgeeeetett tgageecaag ggeegggtge ttetggtgga eggeeaceae 60 ctggcctacc gtaccttttt tgccctgaag ggcctcacca ccagccgcgg ggagccggtc 120 caggeggtgt aegggtttge caagageett ttgaaggege taagggaaga eggggatgtg 180 qtqatcqtqq tctttqacqc cqaqqccccc tccttccgcc accagaccta cgaggcctac 240 300 aaggegggge gggeteeeac eeeegaggae ttteeeegge agettgeeet tateaaggag atggtggacc ttttgggcct ggagcgcctc gaggtgccgg gctttgaagc ggatgacgtc 360 ctggctaccc tggccaagaa ggcggaaaag gagggctacg aggtccgcat cctcaccgcc 420 gacaaagacc tttaccagct cctttccgac cgcatccacg tcctccaccc cgaggggtac 480 ctcatcaccc cggcctggct ttgggaaaag tacggcctga ggcccgacca gtgggccgac 540 600 taccgggccc tgaccgggga cgagtccgac aaccttcccg gggtcaaggg catcggggag aagacggcga ggaagcttct ggaggagtgg gggagcctgg aagccctcct caagaacctg 660 gaccggctga agcccgccat ccgggagaag atcctggccc acatggacga tctgaagctc 720 780 tcctgggacc tggccaaggt gcgcaccgac ctgcccctgg aggtggactt cgccaaaagg cgggagcccg accgggaggg ggagaagccc cgggaggagg ccccctggcc cccgccgaa 840

900 ggggccttcg tgggcttcct cctttcccgc cccgagccca tgtgggcgga gcttaaagcc 960 ctggccgcct gcaggggcgg ccgcgtgcac cgggcagcag accccttggc ggggctaaag gacctcaagg aggtccgggg cctcctcgcc aaggacctcg ccgtcttggc ctcgagggag 1020 1080 gggctagacc tcgtgcccgg ggacgacccc atgctcctcg cctacctcct gggcccctcg aacaccaccc ccgaggggt ggcgcggcgc tacggggggg agtggacgga ggacgccgcc 1140 caccgggccc tcctctcgga gaggctccat cggaacetcc ttaagcgcct cgagggggag 1200 1260 gagaagetee tttggeteta ceacgaggtg gaaaageeee tetecegggt cetggeeeat atggaggcca ccggggtacg gctggacgtg gcctaccttc aggccctttc cctggagctt 1320 1380 geggaggaga teegeegeet egaggaggag gtetteeget tggegggeea eeeetteaae 1440 ctcaactccc gggaccagct ggaaagggtg ctctttgacg agcttaggct tcccgccttg 1500 aagaagacga agaagacagg caagcgctcc accagcgccg cggtgctgga ggccctacgg 1560 gaggcccacc ccatcgtgga gaagatcctc cagcaccggg agctcaccaa gctcaagaac 1620 acctacgtgg accccctccc aagcctcgtc cacccgagga cgggccgcct ccacacccgc ttcaaccaga cggccacggc cacggggagg cttagtagct ccgaccccaa cctgcagaac 1680 atccccgtcc gcaccccctt gggccagagg atccgccggg ccttcgtggc cgaggcgggt 1740 1800 tgggegttgg tggeeetgga etatageeag atagagetee gegteetege eeacetetee ggggacgaaa acctgatcag ggtcttccag gaggggaagg acatccacac ccagaccgca 1860 1920 agetggatgt teggegteec eeeggaggee gtggaeeeee tgatgegeeg ggeggeeaag 1980 acggtgaact teggegteet etacggeatg teegeecata ggeteteea ggagettgee atcccctacg aggaggcggt ggcctttata gagcgctact tccaaagctt ccccaaggtg 2040 2100 cgggcctgga tagaaaagac cctggaggag gggaggaagc ggggctacgt ggaaaccctc ttcggaagaa ggcgctacgt gcccgacctc aacgcccggg tgaagagcgt cagggaggcc 2160 2220 geggagegea tggcetteaa catgecegte cagggeaceg cegeegacet catgaagete 2280 gccatggtga agetettece eegecteegg gagatggggg eeegeatget eetecaggte 2340 gccaacgagc tcctcctgga ggccccccaa gcgcgggccg aggaggtggc ggctttggcc aaggaggcca tggagaaggc ctatcccctc gccgtgcccc tggaggtgga ggtggggatg 2400 2445 ggggaggact ggctttccgc caagggtcac caccaccacc accac

<sup>&</sup>lt;210> 2827

<sup>&</sup>lt;211> 815

<sup>&</sup>lt;212> PRT

<sup>&</sup>lt;213> Artificial Sequence

<220>

<223> Synthetic

<400> 2827

Met Asn Ser Leu Pro Leu Phe Glu Pro Lys Gly Arg Val Leu Leu Val 1 5 10 15

Asp Gly His His Leu Ala Tyr Arg Thr Phe Phe Ala Leu Lys Gly Leu 20 25 30

Thr Thr Ser Arg Gly Glu Pro Val Gln Ala Val Tyr Gly Phe Ala Lys
35 40 45

Ser Leu Leu Lys Ala Leu Arg Glu Asp Gly Asp Val Val Ile Val Val 50 55 60

Phe Asp Ala Glu Ala Pro Ser Phe Arg His Gln Thr Tyr Glu Ala Tyr 65 70 75 80

Lys Ala Gly Arg Ala Pro Thr Pro Glu Asp Phe Pro Arg Gln Leu Ala 85 90 95

Leu Ile Lys Glu Met Val Asp Leu Leu Gly Leu Glu Arg Leu Glu Val
100 105 110

Pro Gly Phe Glu Ala Asp Asp Val Leu Ala Thr Leu Ala Lys Lys Ala 115 120 125

Glu Lys Glu Gly Tyr Glu Val Arg Ile Leu Thr Ala Asp Lys Asp Leu 130 135 140

Tyr Gln Leu Leu Ser Asp Arg Ile His Val Leu His Pro Glu Gly Tyr 145 150 155 160

Leu Ile Thr Pro Ala Trp Leu Trp Glu Lys Tyr Gly Leu Arg Pro Asp 165 170 175

Gln Trp Ala Asp Tyr Arg Ala Leu Thr Gly Asp Glu Ser Asp Asn Leu 180 185 190

Pro Gly Val Lys Gly Ile Gly Glu Lys Thr Ala Arg Lys Leu Leu Glu 195 200 205

Glu Trp Gly Ser Leu Glu Ala Leu Leu Lys Asn Leu Asp Arg Leu Lys 210 220

225	АІА	iie	Arg	GIU	230	iie	ьеи	Ala	пть	235	ASP	Asp	Бец	пур	240
Ser	Trp	Asp	Leu	Ala 245	Lys	Val	Arg	Thr	Asp 250	Leu	Pro	Leu	Glu	Val 255	Asp
Phe	Ala	Lys	Arg 260	Arg	Glu	Pro	Asp	Arg 265	Glu	Gly	Glu	Lys	Pro 270	Arg	Glu
Glu	Ala	Pro 275	Trp	Pro	Pro	Pro	Glu 280	Gly	Ala	Phe	Val	Gly 285	Phe	Leu	Leu
Ser	Arg 290	Pro	Glu	Pro	Met	Trp 295	Ala	Glu	Leu	Lys	Ala 300	Leu	Ala	Ala	Cys
Arg 305	Gly	Gly	Arg	Val	His 310	Arg	Ala	Ala	Asp	Pro 315	Leu	Ala	Gly	Leu	Lys 320
Asp	Leu	Lys	Glu	Val 325	Arg	Gly	Leu	Leu	Ala 330	Lys	Asp	Leu	Ala	Val 335	Leu
Ala	Ser	Arg	Glu 340	Gly	Leu	Asp	Leu	Val 345	Pro	Gly	Asp	Asp	Pro 350	Met	Leu
Leu	Ala	Tyr 355	Leu	Leu	Gly	Pro	Ser 360	Asn	Thr	Thr	Pro	Glu 365	Gly	Val	Ala
Arg	Arg 370	Tyr	Gly	Gly	Glu	Trp 375	Thr	Glu	Asp	Ala	Ala 380	His	Arg	Ala	Leu
Leu 385	Ser	Glu	Arg	Leu	His 390	Arg	Asn	Leu	Leu	Lys 395	Arg	Leu	Glu	Gly	Glu 400
Glu	Lys	Leu	Leu	Trp 405	Leu	Tyr	His	Glu	Val 410	Glu	Lys	Pro	Leu	Ser 415	Arg
Val	Leu	Ala	His 420	Met	Glu	Ala	Thr	Gly 425	Val	Arg	Leu	Asp	Val 430	Ala	Tyr
Leu	Gln	Ala 435	Leu	Ser	Leu	Glu	Leu 440	Ala	Glu	Glu	Ile	Arg 445	Arg	Leu	Glu
Glu	Glu 450	Val	Phe	Arg	Leu	Ala 455	Gly	His	Pro	Phe	Asn 460	Leu	Asn	Ser	Arg
Asp	Gln	Leu	Glu	Ara	Val	Leu	Phe	Asp	Glu	Leu	Ara	Leu	Pro	Ala	Leu

Lys Lys Thr Lys Lys Thr Gly Lys Arg Ser Thr Ser Ala Ala Val Leu 485 490 495

Glu Ala Leu Arg Glu Ala His Pro Ile Val Glu Lys Ile Leu Gln His
500 505 510

Arg Glu Leu Thr Lys Leu Lys Asn Thr Tyr Val Asp Pro Leu Pro Ser 515 520 525

Leu Val His Pro Arg Thr Gly Arg Leu His Thr Arg Phe Asn Gln Thr 530 540

Ala Thr Ala Thr Gly Arg Leu Ser Ser Ser Asp Pro Asn Leu Gln Asn 545 550 555 560

Ile Pro Val Arg Thr Pro Leu Gly Gln Arg Ile Arg Arg Ala Phe Val 565 570 575

Ala Glu Ala Gly Trp Ala Leu Val Ala Leu Asp Tyr Ser Gln Ile Glu 580 585 590

Leu Arg Val Leu Ala His Leu Ser Gly Asp Glu Asn Leu Ile Arg Val
595 600 605

Phe Gln Glu Gly Lys Asp Ile His Thr Gln Thr Ala Ser Trp Met Phe 610 615 620

Gly Val Pro Pro Glu Ala Val Asp Pro Leu Met Arg Arg Ala Ala Lys 625 630 635 640

Thr Val Asn Phe Gly Val Leu Tyr Gly Met Ser Ala His Arg Leu Ser 645 650 655

Gln Glu Leu Ala Ile Pro Tyr Glu Glu Ala Val Ala Phe Ile Glu Arg 660 665 670

Tyr Phe Gln Ser Phe Pro Lys Val Arg Ala Trp Ile Glu Lys Thr Leu 675 680 685

Glu Glu Gly Arg Lys Arg Gly Tyr Val Glu Thr Leu Phe Gly Arg Arg 690 695 700

Arg Tyr Val Pro Asp Leu Asn Ala Arg Val Lys Ser Val Arg Glu Ala 705 710 715 720

Ala Glu Arg Met Ala Phe Asn Met Pro Val Gln Gly Thr Ala Ala Asp 725 730 735

Leu Met Lys Leu Ala Met Val Lys Leu Phe Pro Arg Leu Arg Glu Met 740 745 750

Gly Ala Arg Met Leu Leu Gln Val Ala Asn Glu Leu Leu Glu Ala 755 760 765

Pro Gln Ala Arg Ala Glu Glu Val Ala Ala Leu Ala Lys Glu Ala Met 770 780

Glu Lys Ala Tyr Pro Leu Ala Val Pro Leu Glu Val Glu Val Gly Met 785 790 795 800

Gly Glu Asp Trp Leu Ser Ala Lys Gly His His His His His His 805 810

<210> 2828

<211> 2445

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2828

atgaattccc tgcccctctt tgagcccaag ggccgggtgc ttctggtgga cggccaccac 60 ctggcctacc gtaccttttt tgccctgaag ggcctcacca ccagccgcgg ggagccggtc ´120 caggcggtgt acgggtttgc caagagcctt ttgaaggcgc taagggaaga cggggatgtg 180 240 gtgatcgtgg tctttgacgc cgaggccccc tccttccgcc accagaccta cgaggcctac aaqqqqqqq qqqctcccac ccccqaqqac tttccccqqc agcttgccct tatcaaggag 300 360 atggtggacc ttttgggctt tacccgcctc gaggtgccgg gctttgaagc ggatgacgtc ctggctaccc tggccaagaa ggcggaaaag gagggctacg aggtccgcat cctcaccgcc 420 480 qacaaaqacc tttaccaqct cctttccqac cqcatccacg tcctccaccc cqagqggtac 540 ctcatcaccc cggcctggct ttgggaaaag tacggcctga ggcccgacca gtgggccgac taccgggccc tgaccgggga cgagtccgac aaccttcccg gggtcaaggg catcggggag 600 660 aagacggcga ggaagcttct ggaggagtgg gggagcctgg aagccctcct caagaacctg gaccggctga agcccgccat ccgggagaag atcctggccc acatggacga tctgaagctc 720

tcctgggacc	tggccaaggt	gcgcaccgac	ctgcccctgg	aggtggactt	cgccaaaagg	780
cgggagcccg	accgggaggg	ggagaagccc	cgggaggagg	ccccctggcc	cccgcccgaa	840
ggggccttcg	tgggcttcct	cctttcccgc	cccgagccca	tgtgggcgga	gcttaaagcc	900
ctggccgcct	gcaggggcgg	ccgcgtgcac	cgggcagcag	accccttggc	ggggctaaag	960
gacctcaagg	aggtccgggg	cctcctcgcc	aaggacctcg	ccgtcttggc	ctcgagggag	1020
gggctagacc	tcgtgcccgg	ggacgacccc	atgctcctcg	cctacctcct	gggcccctcg	1080
aacaccaccc	ccgagggggt	ggcgcggcgc	tacggggggg	agtggacgga	ggacgccgcc	1140
caccgggccc	tcctctcgga	gaggctccat	cggaacctcc	ttaagcgcct	cgagggggag	1200
gagaagctcc	tttggctcta	ccacgaggtg	gaaaagcccc	tctcccgggt	cctggcccat	1260
atggaggcca	ccggggtacg	gctggacgtg	gcctaccttc	aggccctttc	cctggagctt	1320
gcggaggaga	tccgccgcct	cgaggaggag	gtcttccgct	tggcgggcca	ccccttcaac	1380
ctcaactccc	gggaccagct	ggaaagggtg	ctctttgacg	agcttaggct	tcccgccttg	1440
aagaagacga	agaagacagg	caagcgctcc	accagcgccg	cggtgctgga	ggccctacgg	1500
gaggcccacc	ccatcgtgga	gaagatcctc	cagcaccggg	agctcaccaa	gctcaagaac	1560
acctacgtgg	acccctccc	aagcctcgtc	cacccgagga	cgggccgcct	ccacacccgc	1620
ttcaaccaga	cggccacggc	cacggggagg	cttagtagct	ccgaccccaa	cctgcagaac	1680
atccccgtcc	gcaccccctt	gggccagagg	atccgccggg	ccttcgtggc	cgaggcgggt	1740
tgggcgttgg	tggccctgga	ctatagccag	atagagctcc	gcgtcctcgc	ccacctctcc	1800
ggggacgaaa	acctgatcag	ggtcttccag	gaggggaagg	acatccacac	ccagaccgca	1860
agctggatgt	tcggcgtccc	cccggaggcc	gtggaccccc	tgatgcgccg	ggcggccaag	1920
acggtgaact	teggegteet	ctacggcatg	tccgcccata	ggctctccca	ggagcttgcc	1980
atcccctacg	aggaggcggt	ggcctttata	gagcgctact	tccaaagctt	ccccaaggtg	2040
cgggcctgga	tagaaaagac	cctggaggag	gggaggaagc	ggggctacgt	ggaaaccctc	2100
ttcggaagaa	ggcgctacgt	gcccgacctc	aacgcccggg	tgaagagcgt	cagggaggcc	2160
gcggagcgca	tggccttcaa	catgcccgtc	cagggcaccg	ccgccgacct	catgaagctc	2220
gccatggtga	agctcttccc	ccgcctccgg	gagatggggg	cccgcatgct	cctccaggtc	2280
gccaacgagc	tcctcctgga	ggccccccaa	gcgcgggccg	aggaggtggc	ggctttggcc	2340
aaggaggcca	tggagaaggc	ctatcccctc	gccgtgcccc	tggaggtgga	ggtggggatg	2400
ggggaggact	ggctttccgc	caagggtcac	caccaccacc	accac		2445

<210> 2829

<211> 815

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2829

Met Asn Ser Leu Pro Leu Phe Glu Pro Lys Gly Arg Val Leu Leu Val 1 5 10 15

Asp Gly His His Leu Ala Tyr Arg Thr Phe Phe Ala Leu Lys Gly Leu 20 25 30

Thr Thr Ser Arg Gly Glu Pro Val Gln Ala Val Tyr Gly Phe Ala Lys 35 40 45

Ser Leu Leu Lys Ala Leu Arg Glu Asp Gly Asp Val Val Ile Val Val 50 55 60

Phe Asp Ala Glu Ala Pro Ser Phe Arg His Gln Thr Tyr Glu Ala Tyr 65 70 75 80

Lys Ala Gly Arg Ala Pro Thr Pro Glu Asp Phe Pro Arg Gln Leu Ala 85 90 95

Leu Ile Lys Glu Met Val Asp Leu Leu Gly Phe Thr Arg Leu Glu Val
100 105 110

Pro Gly Phe Glu Ala Asp Asp Val Leu Ala Thr Leu Ala Lys Lys Ala 115 120 125

Glu Lys Glu Gly Tyr Glu Val Arg Ile Leu Thr Ala Asp Lys Asp Leu 130 135 140

Tyr Gln Leu Leu Ser Asp Arg Ile His Val Leu His Pro Glu Gly Tyr 145 150 155 160

Leu Ile Thr Pro Ala Trp Leu Trp Glu Lys Tyr Gly Leu Arg Pro Asp 165 170 175

Gln Trp Ala Asp Tyr Arg Ala Leu Thr Gly Asp Glu Ser Asp Asn Leu 180 185 190

Pro Gly Val Lys Gly Ile Gly Glu Lys Thr Ala Arg Lys Leu Leu Glu
195 200 205

GIu	1rp 210	GIA	Ser	Leu	Glu	A1a 215	Leu	Leu	ьys	Asn	220	Asp	Arg	Leu	ьуѕ
Pro 225	Ala	Ile	Arg	Glu	Lys 230	Ile	Leu	Ala	His	Met 235	Asp	Asp	Leu	Lys	Leu 240
Ser	Trp	Asp	Leu	Ala 245	Lys	Val	Arg	Thr	Asp 250	Leu	Pro	Leu	Glu	Val 255	Asp
Phe	Ala	Lys	Arg 260	Arg	Glu	Pro	Asp	Arg 265	Glu	Gly	Glu	Lys	Pro 270	Arg	Glu
Glu	Ala	Pro 275	Trp	Pro	Pro	Pro	Glu 280	Gly	Ala	Phe	Val	Gly 285	Phe	Leu	Leu
Ser	Arg 290	Pro	Glu	Pro	Met	Trp 295	Ala	Glu	Leu	Lys	Ala 300	Leu	Ala	Ala	Cys
Arg 305	Gly	Gly	Arg	Val	His 310	Arg	Ala	Ala	Asp	Pro 315	Leu	Ala	Gly	Leu	Lys 320
Asp	Leu	Lys	Glu	Val 325	Arg	Gly	Leu	Leu	Ala 330	Lys	Asp	Leu	Ala	Val 335	Leu
Ala	Ser	Arg	Glu 340	Gly	Leu	Asp	Leu	Val 345	Pro	Gly	Asp	Asp	Pro 350	Met	Leu
Leu	Ala	Tyr 355	Leu	Leu	Gly	Pro	Ser 360	Asn	Thr	Thr	Pro	Glu 365	Gly	Val	Ala
Arg	Arg 370	Tyr	Gly	Gly	Glu	Trp 375	Thr	Glu	Asp	Ala	Ala 380	His	Arg	Ala	Leu
Leu 385	Ser	Glu	Arg	Leu	His 390	Arg	Asn	Leu	Leu	Lys 395	Arg	Leu	Glu	Gly	Glu 400
Glu	Lys	Leu	Leu	Trp 405	Leu	Tyr	His	Glu	Val 410	Glu	Lys	Pro	Leu	Ser 415	Arg
Val	Leu	Ala	His 420	Met	Glu	Ala	Thr	Gly 425	Val	Arg	Leu	Asp	Val 430	Ala	Tyr
Leu	Gln	Ala 435	Leu	Ser	Leu	Glu	Leu 440	Ala	Glu	Glu	Ile	Arg 445	Arg	Leu	Glu
Glu	Glu	Val	Phe	Arg	Leu	Ala	Gly	His	Pro	Phe	Asn	Leu	Asn	Ser	Arg

Asp 465	Gln	Leu	Glu	Arg	Val 470	Leu	Phe	Asp	Glu	Leu 475	Arg	Leu	Pro	Ala	Leu 480
Lys	Lys	Thr	Lys	Lys 485	Thr	Gly	Lys	Arg	Ser 490	Thr	Ser	Ala	Ala	Val 495	Leu
Glu	Ala	Leu	Arg 500	Glu	Ala	His	Pro	Ile 505	Val	Glu	Lys	Ile	Leu 510	Gln	His
Arg	Glu	Leu 515	Thr	Lys	Leu	Lys	Asn 520	Thr	Tyr	Val	Asp	Pro 525	Leu	Pro	Ser
Leu	Val 530	His	Pro	Arg	Thr	Gly 535	Arg	Leu	His	Thr	Arg 540	Phe	Asn	Gln	Thr
Ala 545	Thr	Ala	Thr	Gly	Arg 550	Leu	Ser	Ser	Ser	Asp 555	Pro	Asn	Leu	Gln	Asn 560
Ile	Pro	Val	Arg	Thr 565	Pro	Leu	Gly	Gln	Arg 570	Ile	Arg	Arg	Ala	Phe 575	Val
Ala	Glu	Ala	Gly 580	Trp	Ala	Leu	Val	Ala 585	Leu	Asp	Tyr	Ser	Gln 590	Ile	Glu
Leu	Arg	Val 595	Leu	Ala	His	Leu	Ser 600	Gly	Asp	Glu	Asn	Leu 605	Ile	Arg	Val
Phe	Gln 610	Glu	Gly	Lys	Asp	Ile 615	His	Thr	Gln	Thr	Ala 620	Ser	Trp	Met	Phe
625					Ala 630					635					640
				645	Val				650					655	
			660		Pro	_		665					670		
Tyr	Phe	Gln 675	Ser	Phe	Pro	Lys	Val 680	Arg	Ala	Trp	Ile	Glu 685	Lys	Thr	Leu

Glu Glu Gly Arg Lys Arg Gly Tyr Val Glu Thr Leu Phe Gly Arg Arg 690 695 700

705 710 715 720 Ala Glu Arg Met Ala Phe Asn Met Pro Val Gln Gly Thr Ala Ala Asp 725 Leu Met Lys Leu Ala Met Val Lys Leu Phe Pro Arg Leu Arg Glu Met 740 Gly Ala Arg Met Leu Leu Gln Val Ala Asn Glu Leu Leu Leu Glu Ala Pro Gln Ala Arg Ala Glu Glu Val Ala Ala Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro Leu Ala Val Pro Leu Glu Val Glu Val Gly Met 790 Gly Glu Asp Trp Leu Ser Ala Lys Gly His His His His His His 805 <210> 2830 <211> 2520 <212> DNA <213> Artificial Sequence <220> <223> Synthetic <400> 2830 60 atgaattccg aggcgatgct tccgctcttt gaacccaaag gccgggtcct cctggtggac ggccaccacc tggcctaccg tacctttttt gccctgaagg gcctcaccac cagccggggg 120 180 gageeggtee aggeggtgta egggtttgee aagageettt tgaaggeget aagagaagae ggggacgcgg tgatcgtggt ctttgacgcc gaggccccct ccttccgcca cgaggcctac 240 ggggggtaca aggcggggcg ggctcccacc cccgaggact ttccccggca gcttgccctt 300 atcaaggage tggtggacet cetggggttt accegecteg aggteeeegg etacgaggeg 360 gacgacgttc tcgccaccct ggccaagaag gcggaaaagg aggggtacga ggtgcgcatc 420 480 ctcaccqccq acaaagacct ttaccaqctc ctttccgacc gcatccacqt cctccacccc 540 gaggggtacc tcatcacccc ggcctggctt tgggaaaagt acggcctgag gcccgaccag tgggccgact accgggccct gaccggggac gagtccgaca accttcccgg ggtcaagggc 600

Arg Tyr Val Pro Asp Leu Asn Ala Arg Val Lys Ser Val Arg Glu Ala

atcggggaga agaccgccct caagctcctc aaggagtggg ggagcctgga agccctcctc 660 720 aagaacetgg aceggetgaa geeegeeate egggagaaga teetggeeea catggaegat ctgaagctct cctgggacct ggccaaggtg cgcaccgacc tgcccctgga ggtggacttc 780 gccaaaaggc gggagcccga ccgggagggg cttaaggcct ttttggagag gctggagttc 840 900 ggcagcctcc tccacgagtt cggcctcctg ggaggggaga agccccggga ggaggccccc 960 tggccccgc cggaaggggc cttcgtgggc tttgtgcttt cccgcaagga gcccatgtgg geogatette tggeeetgge egeetgeagg ggeggeegeg tgeaeeggge ageagaeeee 1020 1080 ttggcggggc taaaggacct caaggaggtc cggggcctcc tcgccaagga cctcgccgtc ttggcctcga gggagggct agacctcgtg cccggggacg accccatgct cctcgcctac 1140 1200 ctcctgggcc cctcgaacac caccccgag ggggtggcgc ggcgctacgg gggggagtgg 1260 acggaggacg ccgcccaccg ggccctcctc tcggagaggc tccatcggaa cctccttaag 1320 cgcctcgagg gggaggagaa gctcctttgg ctctaccacg aggtggaaaa gcccctctcc 1380 cgggtcctgg cccatatgga ggccaccggg gtacggctgg acgtggccta ccttcaggcc 1440 ctttccctgg agcttgcgga ggagatccgc cgcctcgagg aggaggtctt ccgcttggcg 1500 ggccacccct tcaacctcaa ctcccgggac cagctggaaa gggtgctctt tgacgagctt 1560 aggetteceg cettgaagaa gacgaagaag acaggeaage getecaceag egeegeggtg ctggaggccc tacgggaggc ccaccccatc gtggagaaga tcctccagca ccgggagctc 1620 accaagetea agaacaceta egtggacece eteceaagee tegtecacee gaggaeggge 1680 1740 cgcctccaca cccgcttcaa ccagacggcc acggccacgg ggaggcttag tagctccgac cccaacctgc agaacatccc cgtccgcacc cccttgggcc agaggatccg ccgggccttc 1800 1860 gtggccgagg cgggttgggc gttggtggcc ctggactata gccagataga gctccgcgtc ctcgcccacc tctccgggga cgaaaacctg atcagggtct tccaggaggg gaaggacatc 1920 cacacccaga ccgcaagctg gatgttcggc gtcccccgg aggccgtgga cccctgatg 1980 cgccgggcgg ccaagacggt gaacttcggc gtcctctacg gcatgtccgc ccataggctc 2040 tcccaggagc ttgccatccc ctacgaggag gcggtggcct ttatagagcg ctacttccaa 2100 2160 agetteecea aggtgeggge etggatagaa aagaeeetgg aggaggggag gaagegggge 2220 tacgtggaaa ccctcttcgg aagaaggcgc tacgtgcccg acctcaacgc ccgggtgaag 2280 agegteaggg aggeegegga gegeatggee tteaacatge eegteeaggg caeegeegee gacctcatga agctcgccat ggtgaagctc ttcccccgcc tccgggagat gggggcccgc 2340 2400 atgetectee aggtegeeaa egageteete etggaggeee eecaagegeg ggeegaggag 2460

gtggcggctt tggccaagga ggccatggag aaggcctatc ccctcgccgt gcccctggag

<210> 2831

<211> 840

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2831

Met Asn Ser Glu Ala Met Leu Pro Leu Phe Glu Pro Lys Gly Arg Val 1 5 10 15

Leu Leu Val Asp Gly His His Leu Ala Tyr Arg Thr Phe Phe Ala Leu 20 25 30

Lys Gly Leu Thr Thr Ser Arg Gly Glu Pro Val Gln Ala Val Tyr Gly
35 40 45

Phe Ala Lys Ser Leu Leu Lys Ala Leu Arg Glu Asp Gly Asp Ala Val 50 55 60

Ile Val Val Phe Asp Ala Glu Ala Pro Ser Phe Arg His Glu Ala Tyr 65 70 75 80

Gly Gly Tyr Lys Ala Gly Arg Ala Pro Thr Pro Glu Asp Phe Pro Arg 85 90 95

Gln Leu Ala Leu Ile Lys Glu Leu Val Asp Leu Leu Gly Phe Thr Arg 100 105 110

Leu Glu Val Pro Gly Tyr Glu Ala Asp Asp Val Leu Ala Thr Leu Ala 115 120 125

Lys Lys Ala Glu Lys Glu Gly Tyr Glu Val Arg Ile Leu Thr Ala Asp 130 135 140

Lys Asp Leu Tyr Gln Leu Leu Ser Asp Arg Ile His Val Leu His Pro 145 150 155 160

Glu Gly Tyr Leu Ile Thr Pro Ala Trp Leu Trp Glu Lys Tyr Gly Leu 165 170 175

Arg	Pro	Asp	Gln 180	Trp	Ala	Asp	Tyr	Arg 185	Ala	Leu	Thr	Gly	Asp 190	Glu	Ser
Asp	Asn	Leu 195	Pro	Gly	Val	Lys	Gly 200	Ile	Gly	Glu	Lys	Thr 205	Ala	Leu	Lys
Leu	Leu 210	Lys	Glu	Trp	Gly	Ser 215	Leu	Glu	Ala	Leu	Leu 220	Lys	Asn	Leu	Asp
Arg 225	Leu	Lys	Pro	Ala	Ile 230	Arg	Glu	Lys	Ile	Leu 235	Ala	His	Met	Asp	Asp 240
Leu	Lys	Leu	Ser	Trp 245	Asp	Leu	Ala	Lys	Val 250	Arg	Thr	Asp	Leu	Pro 255	Leu
Glu	Val	Asp	Phe 260	Ala	Lys	Arg	Arg	Glu 265	Pro	Asp	Arg	Glu	Gly 270	Leu	Lys
Ala	Phe	Leu 275	Glu	Arg	Leu	Glu	Phe 280	Gly	Ser	Leu	Leu	His 285	Glu	Phe	Gly
Leu	Leu 290	Gly	Gly	Glu	Lys	Pro 295	Arg	Glu	Glu	Ala	Pro 300	Trp	Pro	Pro	Pro
Glu 305	Gly	Ala	Phe	Val	Gly 310	Phe	Val	Leu	Ser	Arg 315	Lys	Glu	Pro	Met	Trp 320
Ala	Asp	Leu	Leu	Ala 325	Leu	Ala	Ala	Cys	Arg 330	Gly	Gly	Arg	Val	His 335	Arg
Ala	Ala	Asp	Pro 340	Leu	Ala	Gly	Leu	Lys 345	Asp	Leu	Lys	Glu	Val 350	Arg	Gly
Leu	Leu	Ala 355	Lys	Asp	Leu	Ala	Val 360	Leu	Ala	Ser	Arg	Glu 365	Gly	Leu	Asp
Leu	Val 370	Pro	Gly	Asp	Asp	Pro 375	Met	Leu	Leu	Ala	Tyr 380	Leu	Leu	Gly	Pro
Ser 385	Asn	Thr	Thr	Pro	Glu 390	Gly	Val	Ala	Arg	Arg 395	Tyr	Gly	Gly	Glu	Trp 400
Thr	Glu	Asp	Ala	Ala 405	His	Arg	Ala	Leu	Leu 410	Ser	Glu	Arg	Leu	His 415	Arg
Asn	Leu	Leu	Lys 420	Arg	Leu	Glu	Gly	Glu 425	Glu	Lys	Leu	Leu	Trp 430	Leu	Tyr

His	Glu	Val 435	Glu	Lys	Pro	Leu	Ser 440	Arg	Val	Leu	Ala	His 445	Met	Glu	Ala
Thr	Gly 450	Val	Arg	Leu	Asp	Val 455	Ala	Tyr	Leu	Gln	Ala 460	Leu	Ser	Leu	Glu
Leu 465	Ala	Glu	Glu	Ile	Arg 470	Arg	Leu	Glu	Glu	Glu 475	Val	Phe	Arg	Leu	Ala 480
Gly	His	Pro	Phe	Asn 485	Leu	Asn	Ser	Arg	Asp 490	Gln	Leu	Glu	Arg	Val 495	Leu
Phe	Asp	Glu	Leu 500	Arg	Leu	Pro	Ala	Leu 505	Lys	Lys	Thr	Lys	Lys 510	Thr	Gly
Lys	Arg	Ser 515	Thr	Ser	Ala	Ala	Val 520	Leu	Glu	Ala	Leu	Arg 525	Glu	Ala	His
Pro	Ile 530	Val	Glu	Lys	Ile	Leu 535	Gln	His	Arg	Glu	Leu 540	Thr	Lys	Leu	Lys
Asn 545	Thr	Tyr	Val	Asp	Pro 550	Leu	Pro	Ser	Leu	Val 555	His	Pro	Arg	Thr	Gly 560
Arg	Leu	His	Thr	Arg 565	Phe	Asn	Gln	Thr	Ala 570	Thr	Ala	Thr	Gly	Arg 575	Leu
Ser	Ser	Ser	Asp 580	Pro	Asn	Leu	Gln	Asn 585	Ile	Pro	Val	Arg	Thr 590	Pro	Leu
Gly	Gln	Arg 595	Ile	Arg	Arg	Ala	Phe 600	Val	Ala	Glu	Ala	Gly 605	Trp	Ala	Leu
Val	Ala 610	Leu	Asp	Tyr	Ser	Gln 615		Glu	Leu	Arg	Val 620	Leu	Ala	His	Leu
Ser 625	Gly	Asp	Glu	Asn	Leu 630	Ile	Arg	Val	Phe	Gln 635	Glu	Gly	Lys	Asp	Ile 640
His	Thr	Gln	Thr	Ala 645	Ser	Trp	Met	Phe	Gly 650	Val	Pro	Pro	Glu	Ala 655	Val
Asp	Pro	Leu	Met 660	Arg	Arg	Ala	Ala	Lys 665	Thr	Val	Asn	Phe	Gly 670	Val	Leu
Tvr	Glv	Met	Ser	Ala	His	Ara	Leu	Ser	Gln	Glu	Leu	Ala	Ile	Pro	Tvr

675 680 685

Glu Glu Ala Val Ala Phe Ile Glu Arg Tyr Phe Gln Ser Phe Pro Lys 695

Val Arg Ala Trp Ile Glu Lys Thr Leu Glu Glu Gly Arg Lys Arg Gly

Tyr Val Glu Thr Leu Phe Gly Arg Arg Tyr Val Pro Asp Leu Asn 730

Ala Arg Val Lys Ser Val Arg Glu Ala Ala Glu Arg Met Ala Phe Asn

Met Pro Val Gln Gly Thr Ala Ala Asp Leu Met Lys Leu Ala Met Val 760

Lys Leu Phe Pro Arg Leu Arg Glu Met Gly Ala Arg Met Leu Leu Gln 770 775 780

Val Ala Asn Glu Leu Leu Glu Ala Pro Gln Ala Arg Ala Glu Glu 785 790 795

Val Ala Ala Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro Leu Ala

Val Pro Leu Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu Ser Ala 820 825

Lys Gly His His His His His 835

<210> 2832

<211> 2526

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2832

atgaattegg ggatgetgee cetetttgag ceeaagggee gggtgettet ggtggaegge 60 120

caccacctgg cctaccgcac cttcttcgcc ctgaagggcc tcaccaccag ccgcggggag

180 ccggtgcaga tggtctacgg cttcgcccgg agcctcctca aggccttgaa ggaggacgga 240 caggoggtgg togtggtott tgacgocaag gccccctcct tccgccacga ggcctacgag gcctacaagg cgggccgggc ccccaccccg gaggacttcc cccggcagct cgcccttatc 300 360 aaggagatgg tggacctttt gggcctggcg cgcctcgagg tcccgggcta cgaggcggac 420 gacgttctcg ccaccctggc caagaaggcg gaaaaggagg ggtacgaggt gcgcatcctc accgccgacc gcgacctcta ccaactcgtc tccgaccgcg tcgccgtcct ccaccccgag 480 540 ggccacctca tcaccccgga gtggctttgg gagaagtacg gcctcaggcc ggagcagtgg 600 gtggacttcc gcgccctcgt gggggacccc tccgacaacc tccccggggt caagggcatc 660 ggggagaaga cggcggccaa gctgatccgg gagtggggaa gcctggaaaa ccttcttaag 720 cacctggaac aggtgaaacc tgcctccgtg cgggagaaga tccttagcca catggaggac 780 ctcaagctat ccctggagct atcccgggtg cacacggact tgctccttca ggtggacttt aaggccctgc gccgcaggac ccccgacctg gagggcctga gggccttttt ggaggagctg 840 900 gagtteggea geeteeteea egagttegge eteetggagg eeceegeege ggeggaggaa 960 gctccctggc cgcccccga gggagccttc gtggggtacg ttctttcccg ccccgagccc 1020 atgtgggcgg agcttaacgc cttggccgcc gcctggggcg gccgcgtgca ccgggcagca gaccccttgg cggggctaaa ggacctcaag gaggtccggg gcctcctcgc caaggacctc 1080 geogtettgg cetegaggga ggggetagae etegtgeeeg gggaegaeee catgeteete 1140 1200 gectacetee tgggeecete caacaceace eecgaggggg tggegeggeg etacgggggg 1260 gagtggacgg aggacgccgc ccaccgggcc ctcctctcgg agaggctcca tcggaacctc cttaagegee tegaggggga ggagaagete etttggetet accaegaggt ggaaaageee 1320 1380 ctctcccggg tcctggccca catggaggcc accggggtac ggctggacgt ggcctacctt caggeeettt ceetggaget tgeggaggag ateegeegee tegaggagga ggtetteege 1440 1500 ttggcgggcc acceetteaa ceteaactee egggaceage tggaaagggt getetttgae 1560 gagettagge ttecegeett gaagaagaeg aagaagaeag geaagegete caceagegee geggtgetgg aggecetacg ggaggeeeac cecategtgg agaagateet ceageacegg 1620 gageteacea ageteaagaa cacetaegtg gaceceetee caageetegt ecaceegagg 1680 1740 acgggccgcc tccacacccg cttcaaccag acggccacgg ccacggggag gcttagtagc 1800 tecgaceeca acetgeagaa cateceegte egeaceeeet tgggeeagag gateegeegg gccttcgtgg ccgaggcggg ttgggcgttg gtggccctgg actatagcca gatagagctc 1860 1920 cgcgtcctcg cccacctctc cggggacgaa aacctgatca gggtcttcca ggaggggaag gacatccaca cccagaccgc aagetggatg ttcggcgtcc ccccggaggc cgtggacccc 1980

ctgatgcgcc gggcggccaa gacggtgaac ttcggcgtcc tctacggcat gtccgcccat 2040 2100 aggetetece aggagettge catecectae gaggaggegg tggeetttat agagegetae ttccaaagct tccccaaggt gcgggcctgg atagaaaaga ccctggagga ggggaggaag 2160 cggggctacg tggaaaccct cttcggaaga aggcgctacg tgcccgacct caacgcccgg 2220 gtgaagagcg tcagggaggc cgcggagcgc atggccttca acatgcccgt ccagggcacc 2280 gccgccgacc tcatgaagct cgccatggtg aagctcttcc cccgcctccg ggagatgggg 2340 qcccqcatqc tcctccaqqt cqccaacgaq ctcctcctgg aggcccccca agcgcgggcc 2400 2460 gaggaggtgg cggctttggc caaggaggcc atggagaagg cctatcccct cgccgtgccc 2520 ctggaggtgg aggtggggat gggggaggac tggctttccg ccaagggtca ccaccaccac 2526 caccac

<210> 2833

<211> 842

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2833

Met Asn Ser Gly Met Leu Pro Leu Phe Glu Pro Lys Gly Arg Val Leu 1 5 10 15

Leu Val Asp Gly His His Leu Ala Tyr Arg Thr Phe Phe Ala Leu Lys 20 25 30

Gly Leu Thr Thr Ser Arg Gly Glu Pro Val Gln Met Val Tyr Gly Phe 35 40 45

Ala Arg Ser Leu Leu Lys Ala Leu Lys Glu Asp Gly Gln Ala Val Val 50 60

Val Val Phe Asp Ala Lys Ala Pro Ser Phe Arg His Glu Ala Tyr Glu 65 70 75 80

Ala Tyr Lys Ala Gly Arg Ala Pro Thr Pro Glu Asp Phe Pro Arg Gln 85 90 95

Leu Ala Leu Ile Lys Glu Met Val Asp Leu Leu Gly Leu Ala Arg Leu

Glu	Val	Pro 115	Gly	Tyr	Glu	Ala	Asp 120	Asp	Val	Leu	Ala	Thr 125	Leu	Ala	Lys
Lys	Ala 130	Glu	Lys	Glu	Gly	Tyr 135	Glu	Val	Arg	Ile	Leu 140	Thr	Ala	Asp	Arg
Asp 145	Leu	Tyr	Gln	Leu	Val 150	Ser	Asp	Arg	Val	Ala 155	Val	Leu	His	Pro	Glu 160
Gly	His	Leu	Ile	Thr 165	Pro	Glu	Trp	Leu	Trp 170	Glu	Lys	Tyr	Gly	Leu 175	Arg
Pro	Glu	Gln	Trp 180	Val	Asp	Phe	Arg	Ala 185	Leu	Val	Gly	Asp	Pro 190	Ser	Asp
Asn	Leu	Pro 195	Gly	Val	Lys	Gly	Ile 200	Gly	Glu	Lys	Thr	Ala 205	Ala	Lys	Leu
Ile	Arg 210	Glu	Trp	Gly	Ser	Leu 215	Glu	Asn	Leu	Leu	Lys 220	His	Leu	Glu	Gln
Val 225	Lys	Pro	Ala	Ser	Val 230	Arg	Glu	Lys	Ile	Leu 235	Ser	His	Met	Glu	Asp 240
Leu	Lys	Leu	Ser	Leu 245	Glu	Leu	Ser	Arg	Val 250	His	Thr	Asp	Leu	Leu 255	Leu
Gln	Val	Asp	Phe 260	Lys	Ala	Leu	Arg	Arg 265	Arg	Thr	Pro	Asp	Leu 270	Glu	Gly
Leu	Arg	Ala 275	Phe	Leu	Glu	Glu	Leu 280	Glu	Phe	Gly	Ser	Leu 285	Leu	His	Glu
Phe	Gly 290	Leu	Leu	Glu	Ala	Pro 295	Ala	Ala	Ala	Glu	Glu 300	Ala	Pro	Trp	Pro
Pro 305	Pro	Glu	Gly	Ala	Phe 310	Val	Gly	Tyr	Val	Leu 315	Ser	Arg	Pro	Glu	Pro 320
Met	Trp	Ala	Glu	Leu 325	Asn	Ala	Leu	Ala	Ala 330	Ala	Trp	Gly	Gly	Arg 335	Val
His	Arg	Ala	Ala 340	Asp	Pro	Leu	Ala	Gly 345	Leu	Lys	Asp	Leu	Lys 350	Glu	Val

Arg	GIY	ьеи 355	ьeu	Ala	ьys	Asp	360	АІА	vai	ьeu	АІА	365	Arg	GIU	GIY
Leu	Asp 370	Leu	Val	Pro	Gly	Asp 375	Asp	Pro	Met	Leu	Leu 380	Ala	Tyr	Leu	Leu
Gly 385	Pro	Ser	Asn	Thr	Thr 390	Pro	Glu	Gly	Val	Ala 395	Arg	Arg	Tyr	Gly	Gly 400
Glu	Trp	Thr	Glu	Asp 405	Ala	Ala	His	Arg	Ala 410	Leu	Leu	Ser	Glu	Arg 415	Leu
His	Arg	Asn	Leu 420	Leu	Lys	Arg	Leu	Glu 425	Gly	Glu	Glu	Lys	Leu 430	Leu	Trp
Leu	Tyr	His 435	Glu	Val	Glu	Lys	Pro 440	Leu	Ser	Arg	Val	Leu 445	Ala	His	Met
Glu	Ala 450	Thr	Gly	Val	Arg	Leu 455	Asp	Val	Ala	Tyr	Leu 460	Gln	Ala	Leu	Ser
Leu 465	Glu	Leu	Ala	Glu	Glu 470	Ile	Arg	Arg	Leu	Glu 475	Glu	Glu	Val	Phe	Arg 480
Leu	Ala	Gly	His	Pro 485	Phe	Asn	Leu	Asn	Ser 490	Arg	Asp	Gln	Leu	Glu 495	Arg
Val	Leu	Phe	Asp 500	Glu	Leu	Arg	Leu	Pro 505	Ala	Leu	Lys	Lys	Thr 510	Lys	Lys
Thr	Gly	Lys 515	Arg	Ser	Thr	Ser	Ala 520	Ala	Val	Leu	Glu	Ala 525	Leu	Arg	Glu
Ala	His 530		Ile	Val	Glu	Lys 535	Ile	Leu	Gln	His	Arg 540	Glu	Leu	Thr	Lys
Leu 545	Lys	Asn	Thr	Tyr	Val 550	Asp	Pro	Leu	Pro	Ser 555	Leu	Val	His	Pro	Arg 560
	_			565	Thr				570					575	
			580		Asp			585					590		
Pro	Leu	Gly 595	Gln	Arg	Ile	Arg	Arg	Ala	Phe	Val	Ala	Glu 605	Ala	Gly	Trp

Ala Leu Val Ala Leu Asp Tyr Ser Gln Ile Glu Leu Arg Val Leu Ala 615 His Leu Ser Gly Asp Glu Asn Leu Ile Arg Val Phe Gln Glu Gly Lys Asp Ile His Thr Gln Thr Ala Ser Trp Met Phe Gly Val Pro Pro Glu Ala Val Asp Pro Leu Met Arg Arg Ala Ala Lys Thr Val Asn Phe Gly Val Leu Tyr Gly Met Ser Ala His Arg Leu Ser Gln Glu Leu Ala Ile Pro Tyr Glu Glu Ala Val Ala Phe Ile Glu Arg Tyr Phe Gln Ser Phe 690 695 700 Pro Lys Val Arg Ala Trp Ile Glu Lys Thr Leu Glu Glu Gly Arg Lys 705 Arg Gly Tyr Val Glu Thr Leu Phe Gly Arg Arg Arg Tyr Val Pro Asp 725 Leu Asn Ala Arg Val Lys Ser Val Arg Glu Ala Ala Glu Arg Met Ala 740 Phe Asn Met Pro Val Gln Gly Thr Ala Ala Asp Leu Met Lys Leu Ala Met Val Lys Leu Phe Pro Arg Leu Arg Glu Met Gly Ala Arg Met Leu Leu Gln Val Ala Asn Glu Leu Leu Glu Ala Pro Gln Ala Arg Ala 785 Glu Glu Val Ala Ala Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro Leu Ala Val Pro Leu Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu 825 Ser Ala Lys Gly His His His His His

<210> 2834

<211> 2511

<212> DNA

<213> Artificial Sequence

<220>

## <223> Synthetic

<400> 2834 60 atggaattcc tgcccctctt tgagcccaag ggccgggtgc ttctggtgga cggccaccac 120 ctggcctacc gcaccttcca cgccctgaag ggcctcacca ccagccgcgg ggagccggtc caggcggtgt acgggtttgc caagagcctt ttgaaggcgc taagagaaga cggggatgtg 180 gtgatcgtgg tctttgacgc caaggccccc tccttccgcc acgaggccta cggggggtac 240 aaggegggee gggeeeegae eeeegaggae tteeeeegge agetegeeet cateaaggag 300 360 ctggtggacc tcctggggct ggcgcgcctc gaggtgccgg gctttgaagc ggatgacgtc 420 ctggctaccc tggccaagaa ggcggaaaag gagggctacg aggtgcgcat tctcaccggc 480 gaccgcgacc tttaccaact cgtctccgac cgcgtcgccg tcctccaccc cgagggccac 540 ctcatcaccc cggagtggct ttgggagaag tacggcctca ggccggagca gtgggtggac 600 taccgggcct tggccgggga cccttccgac aacatccccg gcgtgaaggg catcggggag 660 aagacggcga ggaagcttct ggaggagtgg gggagcgtgg aagccctcct caagaacctg gaccggctga agcccgccat ccgggagaag atcctggccc acatggagga cctcaagcta 720 780 tecetggage tatecegggt gegeacegae etceecetgg aggtggaeet egeecagggg 840 cgggagcccg accgggaggg gcttaaggcc tttttggaga ggctggagtt cggaagcctc 900 ctccacgagt teggectgtt ggaaageceg gtggeggegg aggaagetee etggeegeee 960 cccgagggag ccttcgtggg gtacgttctt tcccgccccg agcccatgtg ggcggagctt 1020 aacgcettgg cegeegeetg gggeggeege gtgeaceggg cageagaeee ettggegggg 1080 ctaaaggacc tcaaggaggt ccggggcctc ctcgccaagg acctcgccgt cttggcctcg 1140 agggagggc tagacctcgt gcccggggac gaccccatgc tcctcgccta cctcctgggc ccctccaaca ccaccccga gggggtggcg cggcgctacg ggggggagtg gacggaggac 1200 1260 geogeocace gggeoctect eteggagagg etecategga acetecttaa gegeotegag 1320 ggggaggaga ageteetttg getetaceae gaggtggaaa ageceetete eegggteetg gcccacatgg aggccaccgg ggtacggctg gacgtggcct accttcaggc cctttccctg 1380 1440 gagettgegg aggagateeg eegeetegag gaggaggtet teegettgge gggeeaceee ttcaacctca actcccggga ccagctggaa agggtgctct ttgacgagct taggcttccc 1500 qccttqaaqa aqacqaaqaa gacaggcaag cgctccacca gcgccgcggt gctggaggcc 1560 1620 ctacgggagg cccaccccat cgtggagaag atcctccagc accgggagct caccaagctc 1680 aagaacacct acgtggaccc cctcccaagc ctcgtccacc cgaggacggg ccgcctccac accegettea accagaegge caeggecaeg gggaggetta gtageteega ceceaacetg 1740 cagaacatcc ccgtccgcac ccccttgggc cagaggatcc gccgggcctt cgtggccgag 1800 qcqqqttqqq cqttqqtgqc cctgqactat aqccagatag agctccgcgt cctcgcccac 1860 ctctccqqqq acqaaaacct qatcaqqgtc ttccaggagg ggaaggacat ccacacccag 1920 accgcaaget ggatgttegg egteeceeeg gaggeegtgg acceeetgat gegeegggeg 1980 gccaagacgg tgaacttcgg cgtcctctac ggcatgtccg cccataggct ctcccaggag 2040 2100 cttgccatcc cctacgagga ggcggtggcc tttatagagc gctacttcca aagcttcccc aaggtgcggg cctggataga aaagaccctg gaggagggga ggaagcgggg ctacgtggaa 2160 accetetteg gaagaaggeg etacgtgeee gaceteaacg eeegggtgaa gagegteagg 2220 2280 qaqqccqcqq aqcqcatqqc cttcaacatq cccgtccagg gcaccgccgc cgacctcatg aagetegeca tggtgaaget etteeceege eteegggaga tgggggeeeg catgeteete 2340 caggtcgcca acgagctcct cctggaggcc ccccaagcgc gggccgagga ggtggcggct 2400 ttggccaagg aggccatgga gaaggcctat cccctcgccg tgcccctgga ggtggaggtg 2460 gggatgggg aggactggct ttccgccaag ggtcaccacc accaccacca c 2511

<210> 2835

<211> 837

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2835

Met Glu Phe Leu Pro Leu Phe Glu Pro Lys Gly Arg Val Leu Leu Val 1 5 10 15

Asp Gly His His Leu Ala Tyr Arg Thr Phe His Ala Leu Lys Gly Leu 20 25 30

Thr Thr Ser Arg Gly Glu Pro Val Gln Ala Val Tyr Gly Phe Ala Lys 35 40 45

Ser	Leu 50	Leu	Lys	Ala	Leu	Arg 55	Glu	Asp	Gly	Asp	Val 60	Val	Ile	Val	Val
Phe 65	Asp	Ala	Lys	Ala	Pro 70	Ser	Phe	Arg	His	Glu 75	Ala	Tyr	Gly	Gly	Tyr 80
Lys	Ala	Gly	Arg	Ala 85	Pro	Thr	Pro	Glu	Asp 90	Phe	Pro	Arg	Gln	Leu 95	Ala
Leu	Ile	Lys	Glu 100	Leu	Val	Asp	Leu	Leu 105	Gly	Leu	Ala	Arg	Leu 110	Glu	Val
Pro	Gly	Phe 115	Glu	Ala	Asp	Asp	Val 120	Leu	Ala	Thr	Leu	Ala 125	Lys	Lys	Ala
Glu	Lys 130	Glu	Gly	Tyr	Glu	Val 135	Arg	Ile	Leu	Thr	Gly 140	Asp	Arg	Asp	Leu
Tyr 145	Gln	Leu	Val	Ser	Asp 150	Arg	Val	Ala	Val	Leu 155	His	Pro	Glu	Gly	His 160
Leu	Ile	Thr	Pro	Glu 165	Trp	Leu	Trp	Glu	Lys 170	Tyr	Gly	Leu	Arg	Pro 175	Glu
Gln	Trp	Val	Asp 180	Tyr	Arg	Ala	Leu	Ala 185	Gly	Asp	Pro	Ser	Asp 190	Asn	Ile
Pro	Gly	Val 195	Lys	Gly	Ile	Gly	Glu 200	Lys	Thr	Ala	Arg	Lys 205	Leu	Leu	Glu
Glu	Trp 210	Gly	Ser	Val	Glu	Ala 215	Leu	Leu	Lys	Asn	Leu 220	Asp	Arg	Leu	Lys
Pro 225	Ala	Ile	Arg	Glu	Lys 230	Ile	Leu	Ala	His	Met 235	Glu	Asp	Leu	Lys	Leu 240
Ser	Leu	Glu	Leu	Ser 245	Arg	Val	Arg	Thr	Asp 250	Leu	Pro	Leu	Glu	Val 255	Asp
Leu	Ala	Gln	Gly 260	Arg	Glu	Pro	Asp	Arg 265	Glu	Gly	Leu	Lys	Ala 270	Phe	Leu
Glu	Arg	Leu 275	Glu	Phe	Gly	Ser	Leu 280	Leu	His	Glu	Phe	Gly 285	Leu	Leu	Glu
Ser	Pro 290	Val	Ala	Ala	Glu	Glu 295	Ala	Pro	Trp	Pro	Pro 300	Pro	Glu	Gly	Ala

Phe 305	Val	Gly	Tyr	Val	Leu 310	Ser	Arg	Pro	Glu	Pro 315	Met	Trp	Ala	Glu	Leu 320
Asn	Ala	Leu	Ala	Ala 325	Ala	Trp	Gly	Gly	Arg 330	Val	His	Arg	Ala	Ala 335	Asp
Pro	Leu	Ala	Gly 340	Leu	Lys	Asp	Leu	Lys 345	Glu	Val	Arg	Gly	Leu 350	Leu	Ala
Lys	Asp	Leu 355	Ala	Val	Leu	Ala	Ser 360	Arg	Glu	Gly	Leu	Asp 365	Leu	Val	Pro
Gly	Asp 370	Asp	Pro	Met	Leu	Leu 375	Ala	Tyr	Leu	Leu	Gly 380	Pro	Ser	Asn	Thr
Thr 385	Pro	Glu	Gly	Val	Ala 390	Arg	Arg	Tyr	Gly	Gly 395	Glu	Trp	Thr	Glu	Asp 400
Ala	Ala	His	Arg	Ala 405	Leu	Leu	Ser	Glu	Arg 410	Leu	His	Arg	Asn	Leu 415	Leu
Lys	Arg	Leu	Glu 420	Gly	Glu	Glu	Lys	Leu 425	Leu	Trp	Leu	Tyr	His 430	Glu	Val
Glu	Lys	Pro 435	Leu	Ser	Arg	Val	Leu 440	Ala	His	Met	Glu	Ala 445	Thr	Gly	Val
Arg	Leu 450	Asp	Val	Ala	Tyr	Leu 455	Gln	Ala	Leu	Ser	Leu 460	Glu	Leu	Ala	Glu
Glu 465	Ile	Arg	Arg	Leu	Glu 470	Glu	Glu	Val	Phe	Arg 475	Leu	Ala	Gly	His	Pro 480
Phe	Asn	Leu	Asn	Ser 485	Arg	Asp	Gln	Leu	Glu 490	Arg	Val	Leu	Phe	Asp 495	Glu
Leu	Arg	Leu	Pro 500	Ala	Leu	Lys	Lys	Thr 505	Lys	Lys	Thr	Gly	Lys 510	Arg	Ser
Thr	Ser	Ala 515	Ala	Val	Leu	Glu	Ala 520	Leu	Arg	Glu	Ala	His 525	Pro	Ile	Val
Glu	Lys 530	Ile	Leu	Gln	His	Arg 535	Glu	Leu	Thr	Lys	Leu 540	Lys	Asn	Thr	Tyr
Val	Asp	Pro	Leu	Pro	Ser	Leu	Val	His	Pro	Arg	Thr	Gly	Arg	Leu	His

Thr Arg Phe Asn Gln Thr Ala Thr Ala Thr Gly Arg Leu Ser Ser Ser 565 570 575

Asp Pro Asn Leu Gln Asn Ile Pro Val Arg Thr Pro Leu Gly Gln Arg 580 585 590

Ile Arg Arg Ala Phe Val Ala Glu Ala Gly Trp Ala Leu Val Ala Leu 595 600 605

Asp Tyr Ser Gln Ile Glu Leu Arg Val Leu Ala His Leu Ser Gly Asp 610 620

Glu Asn Leu Ile Arg Val Phe Gln Glu Gly Lys Asp Ile His Thr Gln 625 635 640

Thr Ala Ser Trp Met Phe Gly Val Pro Pro Glu Ala Val Asp Pro Leu 645 650 655

Met Arg Arg Ala Ala Lys Thr Val Asn Phe Gly Val Leu Tyr Gly Met 660 665 670

Ser Ala His Arg Leu Ser Gln Glu Leu Ala Ile Pro Tyr Glu Glu Ala 675 680 685

Val Ala Phe Ile Glu Arg Tyr Phe Gln Ser Phe Pro Lys Val Arg Ala 690 695 700

Trp Ile Glu Lys Thr Leu Glu Glu Gly Arg Lys Arg Gly Tyr Val Glu 705 710 715 720

Thr Leu Phe Gly Arg Arg Tyr Val Pro Asp Leu Asn Ala Arg Val 725 730 735

Lys Ser Val Arg Glu Ala Ala Glu Arg Met Ala Phe Asn Met Pro Val 740 745 750

Gln Gly Thr Ala Ala Asp Leu Met Lys Leu Ala Met Val Lys Leu Phe 755 760 765

Pro Arg Leu Arg Glu Met Gly Ala Arg Met Leu Leu Gln Val Ala Asn 770 780

Glu Leu Leu Glu Ala Pro Gln Ala Arg Ala Glu Glu Val Ala Ala 785 790 795 800 Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro Leu Ala Val Pro Leu 805 810 815

Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu Ser Ala Lys Gly His 820 825 830

His His His His His 835

<210> 2836

<211> 2493

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2836 atgaattccc tgcccctctt tgagcccaag ggccgggtcc tcctggtgga cggccaccac 60 120 ctggcctacc gtaccttttt tgccctgaag ggcctcacca cctcccgggg ggagccggtg 180 cagatggtct acggcttcgc ccggagcctc ctcaaggccc tcaaggagga cggggacgcg gtgatcgtgg tctttgacgc cgaggccccc tccttccgcc accagaccta cgaggcctac 240 aaggegggga gggeteecac eeeegaggae ttteeeegge agettgeeet tateaaggag 300 ctggtggacc tcctggggtt tacccgcctc gaggtccccg gctacgaggc ggacgacgtt 360 ctegecacce tggecaagaa ggeggaaaag gagggetaeg aggtgegeat ceteacegeg 420 480 gaccqqqacc tttaccaqct tctttccgac cgcattcacq tccttcaccc cgaggggtac 540 ctcatcaccc cggcctggct ttgggaaaag tacggcttga ggcccgacca gtgggccgac taccgggccc tgaccgggga cgaatccgac aacctttccg gggtcaaggg catcggggag 600 aagacggcga ggaagcttct ggaggagtgg gggagcctgg aagccctcct caagaacctg 660 720 gaccggctga agcccgccat ccgggagaag atcctggccc acatggacga tctgaagctc teettggage tetecegggt gegeacegae etececetgg aggtggaett egecaaaagg 780 840 cgggagcccg accgggagag gcttagggcc tttctqgaga ggcttgagtt tggcagcctc 900 ctccacgagt tcggcccttt ggaaagcccc agggccgcgg aggaagctcc ctggccgccc cccgagggag ccttcgtggg gtacgttctt tcccgccccg agcccatgtg ggcggagctt 960 1020 aacgccttgg ccgccgccag gggcggccgc gtqcaccggg cagcagaccc cttggcgggg 1080 ctaaaggacc tcaaggaggt ccggggcctc ctcgccaagg acctcgccgt cttggcctcg

agggagggc tagacetegt geeeggggae gaeeceatge teetegeeta eeteetggge 1140 1200 ccctcgaaca ccaccccga gggggtggcg cggcgctacg ggggggagtg gacggaggac geogeceace gggecetect eteggagagg etecategga aceteettaa gegeetegag 1260 ggggaggaga agctcctttg gctctaccac gaggtggaaa agcccctctc ccgggtcctg 1320 1380 geocatatgg aggecacegg ggtaeggetg gaegtggeet acetteagge cettteeetg gagettgegg aggagateeg eegeetegag gaggaggtet teegettgge gggeeaeeee 1440 1500 ttcaacetca acteeeggga eeagetggaa agggtgetet ttgaegaget taggetteee 1560 gccttgaaga agacgaagaa gacaggcaag cgctccacca gcgccgcggt gctggaggcc ctacgggagg cccacccat cgtggagaag atcctccagc accgggagct caccaagctc 1620 1680 aagaacacct acgtggaccc cctcccaagc ctcgtccacc cgaggacggg ccgcctccac accegettea accagaegge caeggeeaeg gggaggetta gtageteega eeccaacetg 1740 1800 cagaacatcc ccgtccgcac ccccttgggc cagaggatcc gccgggcctt cgtggccgag 1860 gegggttggg egttggtgge cetggaetat agecagatag ageteegegt cetegeecae ctctccgggg acgaaaacct gatcagggtc ttccaggagg ggaaggacat ccacacccag 1920 accgcaaget ggatgttegg egteeeeeeg gaggeegtgg acceeetgat gegeegggeg 1980 2040 gccaagacgg tgaacttegg egteetetae ggcatgteeg eccatagget eteecaggag cttgccatcc cctacgagga ggcggtggcc tttatagagc gctacttcca aagcttcccc 2100 aaggtgcggg cctggataga aaagaccctg gaggagggga ggaagcgggg ctacgtggaa 2160 2220 accetetteg gaagaaggeg etaegtgeee gaeeteaaeg eeegggtgaa gagegteagg 2280 gaggeegegg agegeatgge etteaacatg eeegteeagg geacegeege egaceteatg 2340 aagetegeea tggtgaaget etteeeeege eteegggaga tgggggeeeg eatgeteete caggtegeca acgagetect cetggaggee ceccaagege gggeegagga ggtggegget 2400 2460 ttggccaagg aggccatgga gaaggcctat cccctcgccg tgcccctgga ggtggaggtg 2493 gggatgggg aggactggct ttccgccaag ggt

<210> 2837

<211> 831

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2837

Met Asn Ser Leu Pro Leu Phe Glu Pro Lys Gly Arg Val Leu Leu Val 1 5 10 15

Asp Gly His His Leu Ala Tyr Arg Thr Phe Phe Ala Leu Lys Gly Leu 20 25 30

Thr Thr Ser Arg Gly Glu Pro Val Gln Met Val Tyr Gly Phe Ala Arg
35 40 45

Ser Leu Leu Lys Ala Leu Lys Glu Asp Gly Asp Ala Val Ile Val Val 50 55 60

Phe Asp Ala Glu Ala Pro Ser Phe Arg His Gln Thr Tyr Glu Ala Tyr 65 70 75 80

Lys Ala Gly Arg Ala Pro Thr Pro Glu Asp Phe Pro Arg Gln Leu Ala 85 90 95

Leu Ile Lys Glu Leu Val Asp Leu Leu Gly Phe Thr Arg Leu Glu Val
100 105 110

Pro Gly Tyr Glu Ala Asp Asp Val Leu Ala Thr Leu Ala Lys Lys Ala 115 120 125

Glu Lys Glu Gly Tyr Glu Val Arg Ile Leu Thr Ala Asp Arg Asp Leu 130 135 140

Tyr Gln Leu Leu Ser Asp Arg Ile His Val Leu His Pro Glu Gly Tyr 145 150 155 160

Leu Ile Thr Pro Ala Trp Leu Trp Glu Lys Tyr Gly Leu Arg Pro Asp 165 170 175

Gln Trp Ala Asp Tyr Arg Ala Leu Thr Gly Asp Glu Ser Asp Asn Leu 180 185 190

Ser Gly Val Lys Gly Ile Gly Glu Lys Thr Ala Arg Lys Leu Leu Glu 195 200 205

Glu Trp Gly Ser Leu Glu Ala Leu Leu Lys Asn Leu Asp Arg Leu Lys 210 220

Pro Ala Ile Arg Glu Lys Ile Leu Ala His Met Asp Asp Leu Lys Leu 225 230 235 240

Ser	Leu	Glu	Leu	Ser 245	Arg	Val	Arg	Thr	Asp 250	Leu	Pro	Leu	Glu	Val 255	Asp
Phe	Ala	Lys	Arg 260	Arg	Glu	Pro	Asp	Arg 265	Glu	Arg	Leu	Arg	Ala 270	Phe	Leu
Glu	Arg	Leu 275	Glu	Phe	Gly	Ser	Leu 280	Leu	His	Glu	Phe	Gly 285	Pro	Leu	Glu
Ser	Pro 290	Arg	Ala	Ala	Glu	Glu 295	Ala	Pro	Trp	Pro	Pro 300	Pro	Glu	Gly	Ala
Phe 305	Val	Gly	Tyr	Val	Leu 310	Ser	Arg	Pro	Glu	Pro 315	Met	Trp	Ala	Glu	Leu 320
Asn	Ala	Leu	Ala	Ala 325	Ala	Arg	Gly	Gly	Arg 330	Val	His	Arg	Ala	Ala 335	Asp
Pro	Leu	Ala	Gly 340	Leu	Lys	Asp	Leu	Lys 345	Glu	Val	Arg	Gly	Leu 350	Leu	Ala
Lys	Asp	Leu 355	Ala	Val	Leu	Ala	Ser 360	Arg	Glu	Gly	Leu	Asp 365	Leu	.Val	Pro
Gly	Asp 370	Asp	Pro	Met	Leu	Leu 375	Ala	Tyr	Leu	Leu	Gly 380	Pro	Ser	Asn	Thr
Thr 385	Pro	Glu	Gly	Val	Ala 390	Arg	Arg	Tyr	Gly	Gly 395	Glu	Trp	Thr	Glu	Asp 400
Ala	Ala	His	Arg	Ala 405	Leu	Leu	Ser	Glu	Arg 410	Leu	His	Arg	Asn	Leu 415	Leu
Lys	Arg	Leu	Glu 420	Gly	Glu	Glu	Lys	Leu 425	Leu	Trp	Leu	Tyr	His 430	Glu	Val
Glu	Lys	Pro 435	Leu	Ser	Arg	Val	Leu 440	Ala	His	Met	Glu	Ala 445	Thr	Gly	Val
Arg	Leú 450	Asp	Val	Ala	Tyr	Leu 455	Gln	Ala	Leu	Ser	Leu 460	Glu	Leu	Ala	Glu
Glu 465	Ile	Arg	Arg	Leu	Glu 470	Glu	Glu	Val	Phe	Arg 475	Leu	Ala	Gly	His	Pro 480
Phe	Asn	Leu	Asn	Ser 485	Arg	Asp	Gln	Leu	Glu 490	Arg	Val	Leu	Phe	Asp 495	Glu

Leu Arg Leu Pro Ala Leu Lys Lys Thr Lys Lys Thr Gly Lys Arg Ser 500 505 Thr Ser Ala Ala Val Leu Glu Ala Leu Arg Glu Ala His Pro Ile Val Glu Lys Ile Leu Gln His Arg Glu Leu Thr Lys Leu Lys Asn Thr Tyr Val Asp Pro Leu Pro Ser Leu Val His Pro Arg Thr Gly Arg Leu His Thr Arg Phe Asn Gln Thr Ala Thr Ala Thr Gly Arg Leu Ser Ser Ser Asp Pro Asn Leu Gln Asn Ile Pro Val Arg Thr Pro Leu Gly Gln Arg 580 585 590 Ile Arg Arg Ala Phe Val Ala Glu Ala Gly Trp Ala Leu Val Ala Leu 595 Asp Tyr Ser Gln Ile Glu Leu Arg Val Leu Ala His Leu Ser Gly Asp 610 Glu Asn Leu Ile Arg Val Phe Gln Glu Gly Lys Asp Ile His Thr Gln 625 630 635 Thr Ala Ser Trp Met Phe Gly Val Pro Pro Glu Ala Val Asp Pro Leu Met Arg Arg Ala Ala Lys Thr Val Asn Phe Gly Val Leu Tyr Gly Met Ser Ala His Arg Leu Ser Gln Glu Leu Ala Ile Pro Tyr Glu Glu Ala Val Ala Phe Ile Glu Arg Tyr Phe Gln Ser Phe Pro Lys Val Arg Ala Trp Ile Glu Lys Thr Leu Glu Glu Gly Arg Lys Arg Gly Tyr Val Glu Thr Leu Phe Gly Arg Arg Tyr Val Pro Asp Leu Asn Ala Arg Val 730 Lys Ser Val Arg Glu Ala Ala Glu Arg Met Ala Phe Asn Met Pro Val 740 745 750

Gln Gly Thr Ala Ala Asp Leu Met Lys Leu Ala Met Val Lys Leu Phe 755 760 765

Pro Arg Leu Arg Glu Met Gly Ala Arg Met Leu Gln Val Ala Asn 770 780

Glu Leu Leu Glu Ala Pro Gln Ala Arg Ala Glu Glu Val Ala Ala 785 790 795 800

Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro Leu Ala Val Pro Leu 805 810 815

Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu Ser Ala Lys Gly 820 825 830

<210> 2838

<211> 2526

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2838

 60

120

180

240

300 360

420

480 540

600

660

720

gacetegece aggggeggga gecegacegg gagggetta gggeetteet ggagagget gececetage ectegacega agggeette gtgggetteg teeteteeeg eccegaggee gececetage eccegageaga agggeette gtgggetteg teeteteeeg eccegaggee atggggggag aggettaaaag ectegagege tgeaggggg gecgegtgaa ecgggagaca 103 gacetetteg ectegagggag agggettaaa ggaceteaag gaggteeggg gecgegtgaa ecgggagaca 103 gecgetettgg ectegagggag ggggetaaa ggaceteaag gaggteeggg gecteetege eaaggacete 104 gectacetee tggaceette gaacaceae ecegagggg gecteetege eaaggacete 104 gectacetee tggaceette gaacaceae ecegagggg tggegeggeg etaegggggg gagtggaggagg aggaggacgae ececaegggee eteetaggaggggggggggggggggggggggg								
gagtteggaa gcetcetcea egagttegge etcetggagg ecceegece ectgaggaga geceecetgge eccegegga agggeette gtgggetteg tectetceeg eccegagece gageetteg agggetaaaag ectgggegga gegegtggaa ecggggagaa ecggggggagaa gggeggggagaaa ggggetagaa gaggetaaa ggageteaaa ggageteaaa ggageteaaa ggageteaaa ggageteaaa ggaggteagaa etcgtggeegg geeteeteg eaaggagage gegegtettgg ectegagggag ggggagaaaa etcgtggeeg ggaaagaace etaagggagg ggagagaace etaagggggg gagagaace etaagggggg gagagaace etaagggggg gagagaace etaagggggg gagagaace etaagggggg gagagaace etaaggggagg gagagaace etaaggggagg gagagaace etaaggggagg gagagaace etaaggggagg gagagaace etaaggggagg gagagagace etaagggggg etaaceta etagaagace etaaggggagaggagagagagagagagagagagagagaga	ga	agacctca	ggctctcctt	ggagctctcc	cgggtgcgca	ccgacctccc	cctggaggtg	780
atgtgggegg agettaaage cetggeege tgeaggggg geegegtgea cegggeagea 103 gaccettgg egggetaaa ggaceteaag gaggteegg geeteetege caaggacete 104 geegtettgg cetegaggga ggggetagae etegtgeegg geeteetege caaggacete 114 geetacetee tggacette gaacaceae eeegagggg tggeeggeg etacgggggg 126 cetacetee tggacette gaacaceae eeegagggg tggeeggeg etacgggggg 126 cetaagegee tegagggga ggagaagete etettegg agaggeteea teggaacete 126 cettaagegee tegagggga ggagaagete etettegg agaggeteea teggaacete 126 cettaagegee tegagggga ggagaagete etettggetet accacgaggt ggaaaagee 133 ceteteeeggg teetggeeca catggaggee accggggtae ggetggaegt ggeetacett 136 caggeeettt eeetggaget tgeggagga atcgeegge tegaggagga ggeteteege 144 ttggegggee acceetteaa ceteaactee egggaceage tggaaagggt getetttgae 156 gagettagge tteeegeett gaagaagaeg aagaagacag gaaagaetee caacagegee 156 gagettagge tteeegeett gaagaagaeg aagaagaag geaagaetee caacagegee 156 gagettagge tteeegeett gaagaagaeg acceetee caagaeteegt ecaccagagg 166 gageteacea ageteaagaa cacctacetg gacceetee caageetegt ecaccagagg 166 accggeegee tecacaceeg etteaaceag acggeeagag caagggeagag gettagage 176 teegaceea acctgcagaa cateceegte egaaceeeet tgggeeagag gateegeegg 186 cegeteeteg ecacacetee egggagegt gtggeetegg actatageea gataggaete 176 teegaceea acctgcagaa cateceegte egaaceeeet tgggeeagag gateegeegg 186 geettegtgg eegaggeggg ttgggegttg gtggeeetgg actatageea gataggaete 176 teegaceea acctgcagaa gacgtgaat tteegeetee eecagggge egtggaacee 196 gacatecaca eccagacege aagetggatg tteggeeteg actatageea gataggaete 176 tecaaaget teeceaaget eagetgaaa tteegeegtee tetacggag egggggaaga 192 gacatecaca eccagacege aagetggaaa tteggeetee eecaggagg egggaggaag 192 gacatecaca teecaagag egggeeteg aagaaaaga ecctggagag ggggaggaa 216 tecaaaget teeceaaggt geggeeteg aagaaaaga ecctggagag ggggaggaa 216 tecaaaget teeceaaggt gegggeetgg aagaaaaga ecctggagag ggggaggaa 216 tecaaaget teeceaaggt egggacetga aagaeagea aagegegee eagggegee eagggegee eagggagaa 216 tecaaaget teeceaagge eggagaega aagagaeagae eeceggagee eagggagaagae eagggggaggaaggaagaggaagga	ga	acctcgccc	aggggcggga	gcccgaccgg	gaggggctta	gggccttcct	ggagaggctg	840
atgtgggcgg agcttaaagc cctggccgcc tgcaggggg gccgcgtgca ccgggcagca 103 gaccccttgg cggggctaaa ggacctcaag gaggtccggg gcctcctcgc caaggacctc 103 gccgtcttgg cctcgaggga ggggctagac ctcgtgcccg gggacgaccc catgctcctc 114 gcctacctcc tggacccttc gaacaccacc cccgaggggg tggcgcggcg ctacgggggg 126 gagtggacgg aggacgcgc cacccgggcc ctcctctcgg agaggctcca tcggaacctc 114 gcctacctcc tggacgccgc ccaccgggcc ctcctctcgg agaggctcca tcggaacctc 114 gcctacctcc tggagggga ggagaagctc cttttggctct accacgaggt ggaaaagccc 116 cttaagcgcc tcgagggga ggagaagctc cttttggctct accacgaggt ggaaaagccc 116 ctaagcgcc tcctgggcca catggaggac accggggtac ggctgaacgt ggctacctt 118 caggcccttt ccctggagct tgcggaggag atccgccgc tcgaggagga ggtcttccgc 114 ttggcggggc accccttcaa cctcaactcc cgggaccagc tggaaagggt gctctttgac 116 gagcttaggc ttcccgcctt gaagaagacg aagaagacag gcaagcgctc caccagcgcc 116 gagcttaggc ttcccgcctt gaagaagacg aagaagacag gcaagcgctc caccagcgcc 116 gagctcacca agctcaagaa cacctacgtg gaccccctcc caagcctcgt ccacccgagg 116 gagctcacca agctcaagaa cacctacgtg gaccccctcc caagcctcgt ccacccgagg 116 gagctcacca acctgcagaa catccccgt cgcaccccct tgggccagag gcttagtagc 17 tccgaccca acctgcagaa catccccgt cgcacccct tgggccagag gatccgccgg 118 gccttcgtgg ccgaggcggg ttgggcgttg gtggccttg actatagcca gatagagct 18 gccttcgtgg ccgaggcggg ttgggcgttg gtggccctgg actatagca gatagagct 18 gcatcacac cccaacccg ttcaaccac ggagacccc ttgggccagag ggtgagaagcc 19 gcatcacca accacctctc cggggacgaa aacctgatca gggtcttcca ggaggggaa 19 gacatcacac cccaacccg cacccctctc cggggacgaa acctgatca gggtcttca ggaggggaga 19 gacatcacca ggagggcaa gacgggacaa acctgatca ggggctctcaacaa ggggggagaa 19 gacatcacaa cccaaccgc aagctggat ttcggcgtc ccccaagggac cgtggacccc 19 gaggtctccc aggagcgca gagggctgg atagaaaaaga ccctggagag ggggagagaa 216 ctgatgggc tggaaaccct cttcggaaga aggcctacc tctacggcat tccaccacac 226 ggggctacg tggaaaccct cttcggaaga aggcctaca acatgccgg ccgggaggca tcaggggcacc 226 gcgccgacc tcatgaagct cgccaacgag ctcctcctgg aggccccca aggggagcc 226 gccgcatgc tcctccaagt cgccaacgag ctcctcctgg aggccccca aggcgggcc 246 gaggaggtgg aggtgggga agggggagac a	ga	agttcggca	gcctcctcca	cgagttcggc	ctcctggagg	cccccgcccc	cctggaggag	900
gacccettgg cggggctaaa ggacctcaag gaggtccggg gcctcctcgc caaggacctc 100 gccgtcttgg cetegaggga ggggctagac ctcgtgcccg gggacgaccc catgctcctc 110 gcctacctcc tggaccettc gaacaccacc cccgaggggg tggcgggcg ctacgggggg 120 gagtggacgg aggacgacgc ccaccgggc ctccttctgg agagggcgg ctacgggggg 120 gagtggacgg aggacgacgc ccaccgggcc ctcctctcgg agagggtcca tcggaacctc 120 cttaagcgcc tcgaggggag ggagaagctc ctttggctct accacgaggt ggaaaagccc 130 ctctcccggg tcctggccca catggaggca accggggtac ggctggacgt ggcctacctt 130 caggcccttt ccctggagct tgcggaggag atccgccgc tcgaggagga ggtcttccgc 140 ttggcgggcc accccttcaa cctcaactcc cgggaccagc tggaaagggt gctctttgac 150 gaggttaggc accccttcaa cctcaactcc cgggaccagc tggaaagggt gctctttgac 150 gaggttaggc accccttcaa cctcaactcc cgggaccagc tggaaagggt gctctttgac 150 gaggttaggc agcccaca ggaggcccac cccatcgtgg agaagactcc ccaccagcgc 150 gaggctcacca agcccacag ggaggcccac cccatcgtgg agaagactcc ccaccagcgg 160 acgggccgcc tccacaccg cttcaaccag accccctcc caagcctcgt ccacccgggg 160 acgggccgcc tccacacccg cttcaaccag acggccaccc tggggcaggag gcttagtagc 170 tccgaccca acctgcagaa catccccgtc cgcacccct tgggccagag gatccgccgg 180 gccttcggg ccgaggcggg ttggggttg gtggccttg gtggcctgg actatagcca gatagagct 180 gccttcgtgg ccgaggcggg ttgggggttg gtggccttga gggtcttcca ggaggggaag 190 gacatccaca cccagaccgc aagctggatg ttcggggtt gtgggcttg ggggtcttca gggggggagag 190 gacatccaca cccagaccgc aagctggatg ttcggcgtc ccccggaggc cgtggaccc 190 gacatccaca cccagaccgc aagctggatg ttcgggctc tctacggcat gtcggcccat 200 agggcttccc aggaggctac agcgggctag ttcggaagacc 200 ggggctacc tcccaaggt gcggggctag atagaaaga ccctggagag ggggaggaag 210 ccgggggctacc tcccaaggt gcgggaggagga gggggggggg	go	cccctggc	ccccgccgga	aggggccttc	gtgggcttcg	tcctctcccg	ccccgagccc	960
geegtettgg cetegaggga ggggetagae etegtgeeeg gggaegaece catgeteete geetaectee tggaecette gaacaecaee eeegagggg tggegegge etaegggggg gagtggaegg aggaegeege coacegggee eteeteegg agaggeteea teggaacete ettaagegee tegaggggga ggagaagete etttggetet aceaegaggt ggaaaageee eteteeeggg teetggeeea catggaggee aceggggtae ggetggaegt ggeetaeett taggeggee acecetteaa eeteaactee eggagaeaga ggetetteege ttggegggee acecetteaa eeteaactee eggagaeaga ggetetteege gagettagge tteeegeett gaagaagaeg aagaagaeag etaeggggegggg	at	gtgggcgg	agcttaaagc	cctggccgcc	tgcaggggcg	gccgcgtgca	ccgggcagca	1020
goetacetee tggaecette gaacacace ecegagggg tggegegge etaeggggg 126 gagtggaegg aggaegeege ceaeegggee eteeteegg agaggeteea teggaacete 126 ettaagegee tegaggggga ggagaagete etttggetet aceaegaggt ggaaaageee 133 eteeteeggg teetggeeca eatggaggee aceggggtae ggetggaegt ggeetacett 136 eaggeeettt ecetggaget tgeggaggag ateegeege tegaggagga ggtetteege 144 ttggegggee acecetteaa eeteaactee egggaecage tggaaagggt getetttgae 156 gagettagge tteeegeett gaagaagaeg aagaagaeag geaageete eaceagege 156 gagettagge teeegeett gaagaagaeg aagaagaeg geaageete eaceagege 166 gageteacea ageteaagaa eacetaegtg gaceeetee eaageetegt ecaeegagg 166 aegggeegee teeacaceeg etteaaceag aeggeeaegg ecaeggggag gettagtage 176 teegaceea acetgeagaa eateeeggt ggeeeetee tgggeeagag gateegeegg 186 geettegtgg eegaggegg ttgggegttg gtggeeetgg actatageea gatagagete 186 eggeteeteg ecaeetete egggaacgaa aacetgatea gggeeagag gateegeegg 186 geettegtgg eegaggeggg ttgggegttg gtggeeetgg actatageea gatagagete 186 eggeteeteg ecaeetete egggaacgaa aacetgatea gggteeteea ggaggggaag 192 gacateeaca eceagacege aagetggatg tteggegtee eeeeggagge egtggacee 186 egggteeteeg eggeggeeaa gaeggtgaa tteggegtee eeeeggagge egtggacee 196 etgatggee gggeggeeaa gaeggtgaa tteggegtee eeeeggagge egtggaeee 206 etgatggee gggeggeeaa gaeggtgaa tteggegtee tetaeggeat gteegeeat 206 etgatggee gggagettge eateecetae gaggaggegg tggeetttat agagegetae 216 ettecaaaget teeceaaggt gegggeetgg atagaaaaga eeetggagga gggaggagaa 216 etgaggageag tggaaaceet etteggaaga aggegetaeg tgeeegaeet eaaggeege 222 eggggetaeg tggaaaceet etteggaaga aggeettea acatgeeegt eeagggaace 223 egegeegaae teatgaaget egceaaegag eteeteeteg gagagaggag 224 egaggaggtgg eggetttgge eaaggagge aaggeeeeaaaggeeeaaaggeeeeaaaggeeeaaaggee 226 egaggaggtgg eggetttgge eaaggagge atggaaagg eetateeee ggeagagggg 224 egaggaggtgg eggetttgge eaaggagge atggaaagg eetateeee ageegggeee 240 eaaggaggtgg aggtttgge eaaggagge aaggagaag eetateeee egeegagaeee 240 eaaggagggtgg aggtttgge eaaggaggee aaggagaag eetateeee egeegaggeeegaeeeeaaggggaggaggaggaggaggag	ga	acccttgg	cggggctaaa	ggacctcaag	gaggtccggg	gcctcctcgc	caaggacctc	1080
gagtggacgg aggacgccg ccaccgggcc ctectetegg agaggeteca teggaacete cttaagegce tegagggga ggagaagete ctttggetet accacgaggt ggaaaagcce 132 cteteceggg teetggeca catggaggc accggggtae ggetggacgt ggeetacett 132 caggecettt ecctgagget tgeggaggag atcegegee tegaggagga ggeteteege 144 ttggegggee acceetteaa ceteaactee egggaccage tggaaagggt getetttgae 156 gaggttagge tteeegeett gaagaagaeg aagaagaeag geaagegete eaccagegee 156 geggtgetgg aggeetacg ggaggeeae eccategtgg agaagateet ecageacegg 166 gaggeteacea ageteaagaa eacetacgtg gacceetee eaageetegt ecaccegagg 166 acgggeegee teeacaceeg etteaaceag aeggeeaege eacaggggag gettagtage 176 teegaceea acetgeagaa eateecegte egcacceet tgggeeagag gateegeegg 186 geettegtgg eegaggeggg ttgggegttg gtggeettgg actatageag gateegeegg 186 egcgteeteg eccacetete eggggaegaa aacetgatea gggeetteega gatagagget 186 egegteeteg eccacetete eggggaegaa aacetgatea gggeetteeteg eccacetete eggggaegaa aacetgatea gggtetteea ggaggggaag 192 gacateeaea eccagacege aagetggatg tteggeettg actatageea gatagaggte 186 egggteeteeg eccacetete eggggaegaa aacetgatea gggtetteea ggaggggaag 192 gacateeaea eccagacege aagetggatg tteggegtee ecceggagge egtggacee 198 etgatggege ggggggeeaa gacgtggatg tteggegtee ecceggagge egtggaceee 198 etgatggege gggggegeaa gacggggaaa tteggegtee tetaaggeat gteegeeeat 206 aggeteteee aggaggettg ecateeeetae gaggaggegg tggeetttat agagegetae 216 eggggetaeg teggaaaceet etteggaaga aggegetaeg tgeeegaaee eacaggegge gegggeegaae teagggagge egggaggeaga aggeettee acatgeeegg 222 gtgaagaagge teagggagge egggaggeg atggeettea acatgeeeg eggggaggaae ggeegeaege teatgaagae eggeaggege atggeettea acatgeeega egggaggagg geeegeatge teeteeaggt egeeaaggg eccataggtg aageeeecaa aggegggee 236 ggeggaggaggaggggaggaggaggaggaggaggaggagg	go	ccgtcttgg	cctcgaggga	ggggctagac	ctcgtgcccg	gggacgaccc	catgctcctc	1140
cttaagcgcc tcgaggggga ggagaagctc ctttggctct accacgaggt ggaaaagccc 1333 ctctcccggg tcctggccca catggaggcc accggggtac ggctggacgt ggcctacctt 1334 caggcccttt ccctggagct tgcggaggag atccgcgcc tcgaggagga ggtcttccgc 1443 ttggcgggcc accccttcaa cctcaactcc cgggaccagc tggaaagggt gctctttgac 1543 gagcttaggc ttcccgcctt gaagaagacg aagaagacag gcaagcgtc caccagcgcc 1544 gagggttaggc ttcccgcctt gaagaagacg aagaagacag gcaagcgtc caccagcgcc 1544 gaggttaggc ttcccgcctt gaagaagacg aagaagacag gcaagcgtc caccagcgcc 1544 gaggttaggc ttcccgcctt gaagaagacg aagaagacag gcaagcgtc caccagcggc 1544 gaggttcacca agctcaagaa cacctacgtg gaccccctcc caagcctcgt ccacccgagg 1644 acgggccgcc tccacacccg cttcaaccag acggccaccg ccacggggag gcttagtagc 1744 tccgaaccca acctgcagaa catccccgtc ggaccccctt tgggccagaag gatccgccgg gccttcgtgg ccgagggggg ttgggcgttg gtggccttgg actatagcca gatagagctc 1844 cgcgtcctcg cccacctctc cggggacgaa aacctgatca gggtcttcca ggagggggaag 1944 ggacatccaca cccagaccgc aagctggatg ttcggcgtcc ccccggaggc cgtggacccc 1944 cgggtcctcca cccagaccgc aagctggatg ttcggcgtcc ccccggaggc cgtggacccc 1944 cggggctccca aggaggtgaac gggggaggaag tcggggcttacg tggaacccc 1944 cggggctccc aggaggctaccc aggaggtgacccc aaggagggggggggg	go	cctacctcc	tggacccttc	gaacaccacc	cccgaggggg	tggcgcggcg	ctacgggggg	1200
ctctcccggg tcctggccca catggaggcc accggggtac ggctgacgt ggcctacctt 138 caggccttt ccctggagct tgcggagga atccgccgc tcgaggagga ggtcttccgc 144 ttggcgggcc acccettcaa cctcaactcc cgggaccagc tggaaagggt gctctttgac 156 gagcttaggc ttcccgcctt gaagaagacg aagaagacag cacaagcgcc caccagcgcc 156 gaggttaggc ttcccgcctt gaagaagacg aagaagacag gcaagcgctc caccagcgcc 156 gaggttctgg aggccctacg ggaggcccac cccatcgtgg agaagatcct ccaccagcgc 166 gaggtctacca agctcaagaa cacctacgtg gaccccctcc caagcctcgt ccacccgagg 166 accggccgcc tccaacaccg cttcaaccag acggccacgg ccacggggag gcttagtagc 174 tccgacccca acctgcagaa catccccgtc cgcacccct tgggccagag gatccgccgg 186 gccttcgtgg ccgaggcggg ttgggcgttg gtggccctgg actatagca gatagagctc 186 cgcgtcctcg cccacctctc cggggacgaa aacctgatca gggtcttcca ggaggggaag 195 gacatccaca cccagaccgc aagctggatg ttcggcgtcg actatagca gatagagctc 186 cgcgtcctcg cccacctctc cggggacgaa aacctgatca gggtcttcca ggaggggaag 195 gacatccaca cccagaccgc aagctggatg ttcggcgtcc ccccggaggc cgtggacccc 196 ctgatgcgcc ggggggccaa gacggtgaac ttcggcgtcc ccccggaggc cgtggacccc 196 ctgatgcgcc ggggggccaa gacggtgaac ttcggcgtcc tctacggcat gtccgcccat 206 aggctctccc aggaggttg catccctac gaggaggggg tggctttat agagcgctac 216 ttccaaagct tccccaaggt gcggggctgg atagaaaaga ccctggagga ggggaggaag 216 cggggctacg tggaaaccct cttcggaaga aggcgctacg tgcccgacct caacgcccgg gtgaagaggc tcagggggcg atggccttca acatgcccgt ccagggcacc gcggaggcgc tcctccagg aggccccca aggcggccc gccgcatgc tcctccaggt cgccaacgag ctcctcctgg aggccccca aggcgggcc 226 gccgcatgc tcctccaggt cgccaacgag ctcctcctgg aggccccca aggcgggcc 246 gaggaggtgg cggctttgg caaggaggc atggagaag cctatccct cgccgtgccc 246 ctggagggtgg gggtttggc caaggaggcc atggagaag cctatcccc cgccgtgccc 246 ctggagggggg aggtgggaggaag aggggaggaggaggaggaggaggaggagga	ga	agtggacgg	aggacgccgc	ccaccgggcc	ctcctctcgg	agaggctcca	tcggaacctc	1260
caggcecttt cectggaget tgeggaggag atecgeegee teggagagga ggtetteege 1446 ttggegggee acceetteaa ceteaactee egggaceage tggaaagggt getetttgae 156 gagettagge tteeegeett gaagaagaeg aagaagaeg geaagegete caccagegee 156 geggtgetgg aggeectaeg ggaggeecae eccategtgg agaageteet ecageacegg 166 gageteacea ageteaagaa cacetaegtg gaceecetee eaageetegt ecaceegagg 166 aegggeegee tecaacaceg etteaaceag aeggeeacgg ecaeggggag gettagtage 177 teegaceeca acetgeagaa cateceegte egeaceeet tgggeeagag gateegeegg 186 geettegtgg eegaggeggg ttgggeeftg gtggeeetgg actatageea gatagagete 186 egegteeteg eccacetete egggagagaa aacetgatea gggtetteea ggaggggaag 192 gacateeaca eccagacege aagetggatg tteggeefte ecceggagge egtggacee 193 gacateeaca eccagacege aagetggatg tteggegtee ecceggagge egtggacee 193 etgatgegee gggeggeeaa gaeggtgaac tteggegtee tetaacggeat gteegeeeat 204 aggeteteee aggagettge cateeectae gaggagggg tggeetttat agagegetae 216 tteeaaaget teeceaaggt gegggeetgg atagaaaaga ecctggagga ggggaggaag 216 eggggetaeg tggaaaceet etteggaaga aggegetaeg tgeeegaeet eaaegeeegg 223 gtgaagaggg teaggagge egeggagege atggeettea acatgeeegt ecagggeace 226 geegeegaee teatgaaget egecaatggtg aagetettee ecegeeteeg ggagatgggg 234 geeegeatge teeteeaggt egecaatggtg aagetettee eegegteee 246 gaggaggtgg eggetttgge eaaggaggee atggagaagg ectateeeet egeegtgeee 246 gaggaggtgg eggetttgge eaaggaggee atggagaagg ectateeeet egeegtgeee 246 etggaggtgg eggetttgge eaaggaggee atggagaagg ectateeeet egeegtgeee 246 etggagggtgg eggetttgge eaaggaggee atggagaagg ectateeeet egeegtgeee 246 etggagggggg aggtttgge caaggaggee atggagaagg ectateeeet egeegtgeee 246 etggagggtgg eggetttgge eaaggaggee atggagaagg ectateeeet egeegtgeee 246 etggagggtgg aggttgggagat gggggaggae tggettteeg ecaagggtea ecaegaggee 246 etggaggtgg aggtggggat gggggaggagae tggettteeg ecaagggtea ecaecaecae 256	ct	taagcgcc	tcgaggggga	ggagaagctc	ctttggctct	accacgaggt	ggaaaagccc	1320
ttggcgggcc acccettcaa cetcaactee egggaceage tggaaagggt getetttgac 150 gagettagge ttecegeett gaagaagacg aagaagacg geaagegete caceagegee 150 geggtgetgg aggeectacg ggaggeceae eccategtgg agaagateet ecageacegg 160 gageteacea ageteaagaa cacetacgtg gaceecetee eaageetegt ecaceegagg 160 aegggeegee tecacaceeg etteaaceag acggecaceg ecacegggag gettagtage 170 tecgacecea acetgeagaa cateceegte egcaceceet tgggecagag gateegeegg 180 geettegtgg ecgaggeggg ttgggegttg gtggeectgg actatageea gatagagete 180 egcettegtgg ecgaggeggg ttgggegttg gtggeectgg actatagea gatagagete 180 egcgteeteg eccacetete eggggacgaa aacetgatea gggtetteea ggaggggaag 190 gacateeaca eccagacege aagetggatg tteggegtee ecceggagge egtggacee 190 ettgatgegee gggeggeeaa gacggtgaae tteggegtee tetaacggeat gteegeeat 200 aggeteteee aggagettge eateecetae gaggaggegg tggeetttat agagegetae 210 etteeaaaget teeceaaggt gegggeetgg atagaaaaga ecetggagga ggggaggaag 210 eggggetaee teatggaaaceet etteggaaga aggegetaeg tgeecgacet eaacgeeegg 220 gtgaagagge teaggagage egggageetgg atagaaaaga ecetggagga ggggaggaag 210 eggggetaeg teggaaaceet etteggaaga aggeettea acatgeeegt ecagggaee 220 geeggeegaee teatgaaget egecaatggtg aagetettee eeggeeteeg ggaggatggg 221 egeegeatge teeteeaggt egeeaacgag eteeteeteg gagagatggg 222 geeggaagee teeteeaagge egeeaaagag eteeteetegg aggeeeecaa agegeggee 240 gaggaggtgg eggetttgge eaaggagge atggagaagg ectateeeet egeegtgeee 240 egaggaggtgg eggetttgge eaaggagge atggagaagg ectateeeet egeegtgeee 240 ettggaggtgg aggetttgge eaaggaggee atggagaagg ectateeeet egeegtgeee 240 ettggaggtgg aggetttgge eaaggaggee atggagaagg ectateeeet egeegtgeee 240 ettggaggtgg aggettgge aggggaggae tggettteeg eaaagggtee 240 ettggaggtgg aggttggga ggggaggae atggggagaag ectateeeet egeegtgeee 240 ettggagggggaggaggaaggaggaggaaggaggaggagga	ct	ctcccggg	tcctggccca	catggaggcc	accggggtac	ggctggacgt	ggcctacctt	1380
gagettagge ttecegeett gaagaagaeg aagaagaeg geaagegete caceagegee 156 geggtgetgg aggeeetaeg ggaggeecae eecategtgg agaagateet eeageaeegg 163 gageteaeea ageteaagaa eacetaegtg gaeeeeetee eaageetegt eeaeeegagg aeggeegee teeaeaeeeg etteaaeeag aeggeeaegg eeaegggagg gettagtage 174 teegaeeeea acetgeagaa eateeeegte egeaeeeeet tgggeeagag gateegeegg geettegtgg eegaggeggg ttgggegttg gtggeeetgg actatageea gatagagete egggteeteg eecaeetete eggggaegaa aacetgatea gggtetteea ggaggggaag gacateeaea eecagaeega aagetggatg tteggegtee eeceggagge egtggaeeee 196 etgatgegee gggeggeeaa gaeggtgaae tteggegtee tetaeggeat gteegeeat aggeteteee aggagettge eateeeetae gaggaggggg tggeetttat agagegetae 216 tteeaaaget teeeeaaggt gegggeetgg atagaaaaga eectggagga ggggaggaag 216 eggggetaeg tggaaaeeet etteggaaga aggegetaeg tgeeegaeet eaaegeeegg gtgaagageg teagggagge egeggagege atggeettea acatgeeegt eeaggeaeee 226 geegeegaee teatgaaget egeeaatggt aagetettee eeegeeteeg ggagatggg 226 geegeegaee teatgaaget egeeaatggt aagetettee eeegeeteeg ggagatggg 226 geegeegatge teeteeaggt egeeaaegag eteeteeteg aggeeeeee 226 gaggaggtgg eggetttgge eaaggaggee atggaaagg eetateeee aggegggee 246 gaggaggtgg eggetttgge eaaggaggee atggagaagg eetateeee egeegtgeee 246 etggaggtgg aggtgggat gggggaggae tggettteeg eeaagggtea eeaeeeee 226 etggaggtgg aggtgggat gggggaggae tggettteeg eeaagggtee 246 etggaggtgg aggtgggat gggggaggae tggettteeg eeaagggtea eeaeeeeee 226	ca	aggcccttt	ccctggagct	tgcggaggag	atccgccgcc	tcgaggagga	ggtcttccgc	1440
geggtgetgg aggeectaeg ggaggeecae eccategtgg agaagateet ecageaeegg 162 gageteaeea ageteaagaa eacetaegtg gaeceeetee eaageetegt ecaceegagg 162 aegggeegee tecacaeeeg etteaaeeag aeggeeaegg ecaeggggag gettagtage 174 teegaeeeea aeetgeagaa eateeeegte egeaeeeet tgggeeagag gateegeegg 182 geettegtgg eegaggeggg ttgggegttg gtggeeetgg actatageea gatagagete 182 egegteeteg eccacetete eggggaegaa aacetgatea gggtetteea ggaggggaag 192 gaeateeaea eccagaeege aagetggatg tteggegtee eeceeggagge egtggaeeee 193 ettgatgegee gggeggeeaa gaeggtgaae tteggegtee tetaeggeat gteegeeeat 204 aggeteteee aggagettge eateeeetae gaggaggegg tggeetttat agagegetae 216 tteeaaaget teeeeaaggt gegggeetgg atagaaaaga eeetggagga ggggaggaag 216 eggggetaeg tggaaaeeet etteggaaga aggegetaeg tgeeegaeet eaaegeeegg gtgaagageg teagggagge egeggagee atggeettea acatgeeegt eeagggeaee geegeegaee teatgaaget egeeatggtg aagetettee eeegeeteeg ggagatgggg 223 geeegeatge teeteeaggt egeeaaegag eteeteetegg aggeeeeea ageegeggee 246 gaggaggtgg eggetttgge eaaggaggee atggaaagg eetateeee eegegggeee 246 gaggaggtgg eggetttgge eaaggaggee atggagaagg eetateeee egeegtgeee 246 etggaggtgg aggtgggat gggggaggae tggettteeg eeaagggtea eeaceaeea 256	tt	ggcgggcc	accccttcaa	cctcaactcc	cgggaccagc	tggaaagggt	gctctttgac	1500
gageteacea ageteaagaa cacetaegtg gaceceetee caageetegt ceaceegagg 166 aegggeegee tecacaceeg etteaaceag aeggeeacegg ceacegggag gettagtage 176 tecgaceeca acetgeagaa cateceegte egcaceecet tgggeeagag gateegeegg 186 geettegtgg eegaggeggg ttgggeettg gtggeeetgg actatageea gatagagete 186 egcgteeteg eccacetete eggggaegaa aacetgatea gggtetteea ggaggggaag 192 gacateeaca eccagacege aagetggatg tteggeegte ecceggagge egtggaceee 193 ectgatgegee gggeggeeaa gaeggtgaac tteggegtee tetaeggeat gteegeecat 204 aggeteteee aggaggttge eateeectae gaggaggegg tggeettat agagegetae 216 ttecaaaget tececaaggt gegggeetgg atagaaaaga ecctggagga ggggaggaag 216 eggggetaeg teggaaceet etteggaaga aggegetaeg tgeeegaeet eaaegeeegg 226 gtgaagageg teagggagge egeggagee atggeettea acatgeeegt ecagggeace 226 geegeegaee teatgaaget egeeaaegag eteeteetgg aggeeeeca agegggge 226 geegeegaee teeteeaggt egeeaaegag eteeteetgg aggeeeceea agegeggee 226 gaggaggtgg eggetttgge eaaggaggee atggaagaag ectateeeca agegeggee 226 gaggaggtgg eggetttgge eaaggaggee atggagaagg eetateeeca agegeggee 226 gaggaggtgg eggetttgge eaaggaggee atggagaagg ectateeeca agegeggee 246 gaggaggtgg eggetttgge eaaggaggee atggagaagg ectateeeca agegeggee 246 etggaggggg aggtggg eggetttgge eaaggaggee atggagaagg ectateeect egeegtgeee 246 etggagggtgg aggtgggaggaaggae tggettteeg eeaagggtea eccacaceae 256	ga	agcttaggc	ttcccgcctt	gaagaagacg	aagaagacag	gcaagcgctc	caccagcgcc	1560
acgggccgcc tccacacccg cttcaaccag acggccacgg ccacggggag gcttagtagc 1746 tccgacccca acctgcagaa catccccgtc cgcacccct tgggccagag gatccgccgg 1866 gccttcgtgg ccgaggcggg ttgggcgttg gtggccctgg actatagcca gatagagctc 1866 cgcgtcctcg cccacctctc cggggacgaa aacctgatca gggtcttcca ggaggggaag 1926 gacatccaca cccagaccgc aagctggatg ttcggcgtcc ccccggaggc cgtggacccc 1986 ctgatgcgcc gggcggcaa gacggtgaac ttcggcgtcc ccccggaggc cgtggacccc 2046 aggctctccc aggagcttgc catcccctac gaggaggcgg tggcctttat agagcgctac 2146 ttccaaagct tccccaaggt gcgggcctgg atagaaaaga ccctggagga ggggaggaag 2146 cggggctacg tggaaaccct cttcggaaga aggcgctacg tgcccgacct caacgcccgg 2226 gtgaagagcg tcagggaggc cgcggagcgc atggccttca acatgcccgt ccagggcacc 2246 gccgccgacc tcatgaagct cgccaacgag ctcctcctgg aggccccca agcgcgggcc 246 gaggaggtgg cggctttggc caaggaggcc atggagaagg cctatcccct cgccgtgccc 2466 ctggaggtgg aggtggggat gggggaggac tggctttcc ccaagggtca ccaccaccac 256	go	eggtgctgg	aggccctacg	ggaggcccac	cccatcgtgg	agaagatcct	ccagcaccgg	1620
tccgacccca acctgcagaa catccccgtc cgcacccct tgggccagag gatccgccgg 186 gccttcgtgg ccgaggcggg ttgggcgttg gtggccctgg actatagcca gatagagctc 186 cgcgtcctcg cccacctctc cggggacgaa aacctgatca gggtcttcca ggaggggaag 192 gacatccaca cccagaccgc aagctggatg ttcggcgtcc ccccggaggc cgtggacccc 198 ctgatgcgcc gggcggcaa gacggtgaac ttcggcgtcc tctacggcat gtccgcccat 204 aggctctccc aggagcttgc catcccctac gaggaggggg tggcctttat agagcgctac 216 ttccaaagct tccccaaggt gcgggcctgg atagaaaaga ccctggagga ggggaggaag 216 cggggctacg tggaaaccct cttcggaaga aggcgctacg tgcccgacct caacgcccgg gtgaagaggcg tcagggagga cgcggagcac atggccttca acatgcccgt ccagggcacc 226 gccgccgacc tcatgaagct cgccatggtg aagctcttca cccgcctccg ggagatgggg 234 gcccgcatgc tcctccaggt cgccaacgag ctcctcctgg aggccccca agcgcgggcc 246 gaggaggtgg cggctttggc caaggaggcc atggagaagg cctatcccct cgccgtgccc 246 ctggaggtgg aggtggggat gggggaggac tggctttccg ccaagggtca ccaccaccac 256	ga	agctcacca	agctcaagaa	cacctacgtg	gaccccctcc	caagcctcgt	ccacccgagg	1680
geettegtgg cegaggeggg ttgggegttg gtggeeetgg actatageca gatagagete 186 egegteeteg cecacetete eggggaegaa aacetgatea gggtetteea ggaggggaag 192 gacatecaca cecagaeege aagetggatg tteggegtee eeceggagge egtggaeeee 196 etgatgegee gggeggeeaa gaeggtgaae tteggegtee tetaeggeat gteegeeat 204 aggeteteee aggagettge cateceetae gaggaggegg tggeetttat agagegetae 216 ttecaaaget tececaaggt gegggeetgg atagaaaaga eeetggagga ggggaggaag 216 eggggetaeg tggaaaeeet etteggaaga aggegetaeg tgeeegaeet eaaegeeegg gtgaagageg teagggagge egeggagege atggeettea acatgeeegt eeagggeaee 226 geegeegaee teatgaaget egeeatggtg aagetettee eeegeeteeg ggagatgggg geeegeatge teeteeaggt egeeaaegag eteeteetgg aggeeeeea agegeggeee gaggaggtgg eggetttgge eaaggagge atggagaagg cetateeeet egeegtgeee 246 etggaggtgg aggtggggat ggggaggae tggettteeg eeaagggtea eeaceacae 256	ac	egggeegee	tccacacccg	cttcaaccag	acggccacgg	ccacggggag	gcttagtagc	1740
cgcgtcctcg cccacctctc cggggacgaa aacctgatca gggtcttcca ggaggggaag 192 gacatccaca cccagaccgc aagctggatg ttcggcgtcc ccccggaggc cgtggacccc 193 ctgatgcgcc gggcggccaa gacggtgaac ttcggcgtcc tctacggcat gtccgcccat 204 aggctctccc aggagcttgc catcccctac gaggaggcgg tggcctttat agagcgctac 216 ttccaaagct tccccaaggt gcgggcctgg atagaaaaga ccctggagga ggggaggaag 216 cggggctacg tggaaaccct cttcggaaga aggcgctacg tgcccgacct caacgcccgg 222 gtgaagagcg tcagggaggc cgcggagcgc atggccttca acatgcccgt ccagggcacc 226 gccgccgacc tcatgaagct cgccatggtg aagctctca cccgcctccg ggagatgggg 234 gcccgcatgc tcctccaggt cgccaacgag ctcctcctgg aggccccca agcgcggcc 246 gaggaggtgg cggctttggc caaggaggcc atggagaagg cctatcccct cgccgtgccc 246 ctggaggtgg aggtggggat gggggaggac tggctttccg ccaagggtca ccaccaccac 256	to	ccgacccca	acctgcagaa	catccccgtc	cgcaccccct	tgggccagag	gatccgccgg	1800
gacatccaca cccagaccgc aagctggatg ttcggcgtcc ccccggaggc cgtggacccc 198 ctgatgcgcc gggcggccaa gacggtgaac ttcggcgtcc tctacggcat gtccgcccat 204 aggctctccc aggagcttgc catcccctac gaggaggcgg tggcctttat agagcgctac 216 ttccaaagct tccccaaggt gcgggcctgg atagaaaaga ccctggagga ggggaggaag 216 cggggctacg tggaaaccct cttcggaaga aggcgctacg tgcccgacct caacgcccgg 222 gtgaagagcg tcagggaggc cgcggagcgc atggccttca acatgcccgt ccagggcacc gccgccgacc tcatgaagct cgccatggtg aagctcttcc cccgcctccg ggagatggg 234 gcccgcatgc tcctccaggt cgccaacgag ctcctcctgg aggccccca agcgcggcc 246 gaggaggtgg cggctttggc caaggaggcc atggagaagg cctatcccct cgccgtgccc 246 ctggaggtgg aggtgggat ggggaggac tggctttccg ccaagggtca ccaccacca 252	go	ccttcgtgg	ccgaggcggg	ttgggcgttg	gtggccctgg	actatagcca	gatagagete	1860
ctgatgcgcc gggcggccaa gacggtgaac ttcggcgtcc tctacggcat gtccgcccat 204 aggctctccc aggagcttgc catcccctac gaggaggcgg tggcctttat agagcgctac 210 ttccaaagct tccccaaggt gcgggcctgg atagaaaaga ccctggagga ggggaggaag 216 cggggctacg tggaaaccct cttcggaaga aggcgctacg tgcccgacct caacgcccgg 222 gtgaagagcg tcagggaggc cgcggagcgc atggccttca acatgcccgt ccagggcacc 228 gccgccgacc tcatgaagct cgccatggtg aagctcttcc cccgcctccg ggagatgggg 234 gcccgcatgc tcctccaggt cgccaacgag ctcctcctgg aggccccca agcgcggcc 246 gaggaggtgg cggctttggc caaggaggcc atggagaagg cctatcccct cgccgtgccc 246 ctggaggtgg aggtggggat gggggaggac tggctttccg ccaagggtca ccaccaccac 252	CC	gegteeteg	cccacctctc	cggggacgaa	aacctgatca	gggtcttcca	ggagggaag	1920
aggetetece aggagettge catecectae gaggaggegg tggeetttat agagegetae 216 ttecaaaget teceeaaggt gegggeetgg atagaaaaga eeetggagga ggggaggaag 216 eggggetaeg tggaaaceet etteggaaga aggegetaeg tgeeegaeet caaegeeegg gtgaagageg teagggagge egeggagege atggeettea acatgeeegt eeagggeaee 226 geegeegaee teatgaaget egeeatggtg aagetettee eeegeeteeg ggagatgggg 236 geeegeatge teeteeaggt egeeaaegag eteeteetgg aggeeeecea agegeggee 246 gaggaggtgg eggetttgge eaaggagge atggagaagg eetateeeet egeegtgeee 246 etggaggtgg aggtgggat gggggaggae tggettteeg eeaagggtea eeaceaee 252	ga	acatccaca	cccagaccgc	aagctggatg	ttcggcgtcc	ccccggaggc	cgtggacccc	1980
ttccaaagct tccccaaggt gcgggcctgg atagaaaaga ccctggagga ggggaggaag 216 cggggctacg tggaaaccct cttcggaaga aggcgctacg tgcccgacct caacgcccgg gtgaagagcg tcagggaggc cgcggagcgc atggccttca acatgcccgt ccagggcacc gccgccgacc tcatgaagct cgccatggtg aagctcttcc cccgcctccg ggagatgggg gcccgcatgc tcctccaggt cgccaacgag ctcctcctgg aggccccca agcgcgggcc gaggaggtgg cggctttggc caaggaggcc atggagaagg cctatcccct cgccgtgccc ctggaggtgg aggtggggat gggggaggac tggctttccg ccaagggtca ccaccaccac 252	ct	gatgcgcc	gggcggccaa	gacggtgaac	ttcggcgtcc	tctacggcat	gtccgcccat	2040
cggggctacg tggaaaccct cttcggaaga aggcgctacg tgcccgacct caacgcccgg gtgaagagcg tcagggaggc cgcggagcgc atggccttca acatgcccgt ccagggcacc gccgccgacc tcatgaagct cgccatggtg aagctcttcc cccgcctccg ggagatgggg gcccgcatgc tcctccaggt cgccaacgag ctcctcctgg aggccccca agcgcggcc gaggaggtgg cggctttggc caaggaggcc atggagaagg cctatcccct cgccgtgccc ctggaggtgg aggtggggat gggggaggac tggctttccg ccaagggtca ccaccaccac  222 223 224 225 226 227 227 228 228 228 228 228 228 228 228	aç	ggctctccc	aggagcttgc	catcccctac	gaggaggcgg	tggcctttat	agagcgctac	2100
gtgaagagg tcagggaggc cgcggagcgc atggccttca acatgcccgt ccagggcacc 228 gccgccgacc tcatgaagct cgccatggtg aagctcttcc cccgcctccg ggagatgggg 234 gcccgcatgc tcctccaggt cgccaacgag ctcctcctgg aggccccca agcgcgggcc 246 gaggaggtgg cggctttggc caaggaggcc atggagaagg cctatcccct cgccgtgccc 246 ctggaggtgg aggtggggat gggggaggac tggctttccg ccaagggtca ccaccaccac 252	tt	ccaaagct	tccccaaggt	gcgggcctgg	atagaaaaga	ccctggagga	ggggaggaag	2160
geogeegace teatgaaget egecatggtg aagetettee eeegeeteeg ggagatgggg 234 geoegeatge teeteeaggt egecaacgag eteeteetgg aggeeeceea agegeggee 246 gaggaggtgg eggetttgge eaaggaggee atggagaagg eetateeeet egeegtgeee 246 etggaggtgg aggtggggat gggggaggae tggettteeg eeaagggtea eeaceacae 252	CC	gggctacg	tggaaaccct	cttcggaaga	aggcgctacg	tgcccgacct	caacgcccgg	2220
georgeatge teetecaggt egecaaegag eteeteetgg aggeeececa agegegggee 240 gaggaggtgg eggetttgge caaggaggee atggagaagg eetateecet egeegtgeee 240 etggaggtgg aggtggggat gggggaggae tggettteeg eeaagggtea eeaceaecae 252	gt	gaagagcg	tcagggaggc	cgcggagcgc	atggccttca	acatgcccgt	ccagggcacc	2280
gaggaggtgg cggctttggc caaggaggcc atggagaagg cctatcccct cgccgtgccc 246 ctggaggtgg aggtggggat gggggaggac tggctttccg ccaagggtca ccaccaccac 252	go	ccgccgacc	tcatgaagct	cgccatggtg	aagctcttcc	cccgcctccg	ggagatgggg	2340
ctggaggtgg aggtggggat gggggaggac tggctttccg ccaagggtca ccaccaccac 252	go	cccgcatgc	tcctccaggt	cgccaacgag	ctcctcctgg	aggcccccca	agcgcgggcc	2400
009949999999999999999999999999999999999	ga	aggaggtgg	cggctttggc	caaggaggcc	atggagaagg	cctatcccct	cgccgtgccc	2460
0.54	ct	ggaggtgg	aggtggggat	gggggaggac	tggctttccg	ccaagggtca	ccaccaccac	2520
caccac 252	Ca	accac						2526

<210> 2839

<211> 842

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2839

Met Asn Ser Glu Ala Met Leu Pro Leu Phe Glu Pro Lys Gly Arg Val 1 5 10 15

Leu Leu Val Asp Gly His His Leu Ala Tyr Arg Thr Phe Phe Ala Leu 20 25 30

Lys Gly Leu Thr Thr Ser Arg Gly Glu Pro Val Gln Ala Val Tyr Gly 35 40 45

Phe Ala Lys Ser Leu Leu Lys Ala Leu Lys Glu Asp Gly Tyr Lys Ala 50 55 60

Val Phe Val Val Phe Asp Ala Lys Ala Pro Ser Phe Arg His Glu Ala 65 70 75 80

Tyr Glu Ala Tyr Lys Ala Gly Arg Ala Pro Thr Pro Glu Asp Phe Pro 85 90 95

Arg Gln Leu Ala Leu Ile Lys Glu Leu Val Asp Leu Leu Gly Phe Thr
100 105 110

Arg Leu Glu Val Pro Gly Tyr Glu Ala Asp Asp Val Leu Ala Thr Leu 115 120 125

Ala Lys Lys Ala Glu Lys Glu Gly Tyr Glu Val Arg Ile Leu Thr Ala 130 135 140

Asp Arg Asp Leu Tyr Gln Leu Val Ser Asp Arg Val Ala Val Leu His 145 150 155 160

Pro Glu Gly His Leu Ile Thr Pro Glu Trp Leu Trp Glu Lys Tyr Gly 165 170 175

Leu Arg Pro Glu Gln Trp Val Asp Phe Arg Ala Leu Val Gly Asp Pro
180 185 190

Ser	Asp	Asn 195	Leu	Pro	Gly	Val	Lys 200	Gly	Ile	Gly	Glu	Lys 205	Thr	Ala	Leu
Lys	Leu 210	Leu	Lys	Glu	Trp	Gly 215	Ser	Leu	Glu	Asn	Leu 220	Leu	Lys	Asn	Leu
Asp 225	Arg	Val	Lys	Pro	Glu 230	Asn	Val	Arg	Glu	Lys 235	Ile	Lys	Ala	His	Leu 240
Glu	Asp	Leu	Arg	Leu 245	Ser	Leu	Glu	Leu	Ser 250	Arg	Val	Arg	Thr	Asp 255	Leu
Pro	Leu	Glu	Val 260	Asp	Leu	Ala	Gln	Gly 265	Arg	Glu	Pro	Asp	Arg 270	Glu	Gly
Leu	Arg	Ala 275	Phe	Leu	Glu	Arg	Leu 280	Glu	Phe	Gly	Ser	Leu 285	Leu	His	Glu
Phe	Gly 290	Leu	Leu	Glu	Ala	Pro 295	Ala	Pro	Leu	Glu	Glu 300	Ala	Pro	Trp	Pro
Pro 305	Pro	Glu	Gly	Ala	Phe 310	Val	Gly	Phe	Val	Leu 315	Ser	Arg	Pro	Glu	Pro 320
Met	Trp	Ala	Glu	Leu 325	Lys	Ala	Leu	Ala	Ala 330	Cys	Arg	Gly	Gly	Arg 335	Val
His	Arg	Ala	Ala 340	Asp	Pro	Leu	Ala	Gly 345	Leu	Lys	Asp	Leu	Lys 350	Glu	Val
Arg	Gly	Leu 355	Leu	Ala	Lys	Asp	Leu 360	Ala	Val	Leu	Ala	Ser 365	Arg	Glu	Gly
Leu	Asp 370	Leu	Val	Pro	Gly	Asp 375	Asp	Pro	Met	Leu	Leu 380	Ala	Tyr	Leu	Leu
Asp 385	Pro	Ser	Asn	Thr	Thr 390	Pro	Glu	Gly	Val	Ala 395	Arg	Arg	Tyr	Gly	Gly 400
Glu	Trp	Thr	Glu	Asp 405	Ala	Ala	His	Arg	Ala 410	Leu	Leu	Ser	Glu	Arg 415	Leu
His	Arg	Asn	Leu 420	Leu	Lys	Arg	Leu	Glu 425	Gly	Glu	Glu	Lys	Leu 430	Leu	Trp
Leu	Tyr	His	Glu	Val	Glu	Lys	Pro	Leu	Ser	Arg	Val	Leu	Ala	His	Met

435 440 445

Glu<br/>450Ala<br/>450Thr<br/>GlyVal<br/>ArgArg<br/>450Asp<br/>455Val<br/>Asp<br/>ArgAla<br/>ArgTyr<br/>460Glu<br/>Glu<br/>GluAla<br/>Glu<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br/>Asp<br

Thr Gly Arg Leu His Thr Arg Phe Asn Gln Thr Ala Thr Ala Thr Gly 565 570 575

Arg Leu Ser Ser Ser Asp Pro Asn Leu Gln Asn Ile Pro Val Arg Thr 580 585 590

Pro Leu Gly Gln Arg Ile Arg Arg Ala Phe Val Ala Glu Ala Gly Trp 595 600 605

Ala Leu Val Ala Leu Asp Tyr Ser Gln Ile Glu Leu Arg Val Leu Ala 610 615 620

His Leu Ser Gly Asp Glu Asn Leu Ile Arg Val Phe Gln Glu Gly Lys 625 635 635

Asp Ile His Thr Gln Thr Ala Ser Trp Met Phe Gly Val Pro Pro Glu 645 650 . 655

Ala Val Asp Pro Leu Met Arg Arg Ala Ala Lys Thr Val Asn Phe Gly 660 665 670

Val Leu Tyr Gly Met Ser Ala His Arg Leu Ser Gln Glu Leu Ala Ile 675 680 685

Pro Tyr Glu Glu Ala Val Ala Phe Ile Glu Arg Tyr Phe Gln Ser Phe 700 690 695 Pro Lys Val Arg Ala Trp Ile Glu Lys Thr Leu Glu Glu Gly Arg Lys 710 720 Arg Gly Tyr Val Glu Thr Leu Phe Gly Arg Arg Arg Tyr Val Pro Asp Leu Asn Ala Arg Val Lys Ser Val Arg Glu Ala Ala Glu Arg Met Ala Phe Asn Met Pro Val Gln Gly Thr Ala Ala Asp Leu Met Lys Leu Ala Met Val Lys Leu Phe Pro Arg Leu Arg Glu Met Gly Ala Arg Met Leu Leu Gln Val Ala Asn Glu Leu Leu Glu Ala Pro Gln Ala Arg Ala 785 Glu Glu Val Ala Ala Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro Leu Ala Val Pro Leu Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu 825 Ser Ala Lys Gly His His His His His <210> 2840 <211> 2526 <212> DNA <213> Artificial Sequence <220> <223> Synthetic <400> 2840 atgaattccg aggcgatgct tccgctcttt gaacccaaag gccgggtcct cctggtggac 60 ggccaccacc tggcctaccg caccttcttc gccctgaagg gcctcaccac gagccggggc 120 gaaccggtgc aggcggtcta cggcttcgcc aagagcctcc tcaaggccct gaaggaggac 180 gggtacaagg ccgtcttcgt ggtctttgac gccaaggccc cctccttccg ccacgaggcc 240 tacgaggect acaaggeggg gagggeeeeg acceeegagg actteeeeeg geagetegee 300 360 ctcatcaagg agctggtgga cctcctgggg tttacccgcc tcgaggtccc cggctacgag gcggacgacg ttctcgccac cctggccaag aaggcggaaa aggaggggta cgaggtgcgc 420 480 atceteaceg cegacegega cetetaceaa etegteteeg acegegtege egteeteeac 540 cccgagggcc acctcatcac cccggagtgg ctttgggaga agtacggcct caggccggag cagtgggtgg acttccgcgc cctcgtgggg gacccctccg acaacctccc cggggtcaag 600 660 ggcatcgggg agaagaccgc cctcaagctc ctcaaggagt ggggaagcct ggaaaacctc ctcaagaacc tggaccgggt aaagccagaa aacgtccggg agaagatcaa ggcccacctg 720 780 gaagacetca ggeteteett ggagetetee egggtgegea eegaeeteee eetggaggtg 840 gacetegeee aggggegga geeegaeegg gaggggetta gggeetteet ggagaggetg 900 gagtteggea geeteeteea egagttegge eteetggagg eeceegeece eetggaggag 960 geocettgge ceeegeegga aggggeette gtgggetteg teeteteeeg ceeegageee 1020 atgtgggcgg agcttaaagc cctggccgcc tgcaggggcg gccgcgtgca ccgggcagca 1080 gaccccttgg cggggctaaa ggacctcaag gaggtccggg gcctcctcgc caaggacctc 1140 gccgtcttgg cctcgaggga ggggctagac ctcgtgcccg gggacgaccc catgctcctc 1200 gcctacctcc tgggcccctc caacaccacc cccgagggg tggcgcggcg ctacgggggg gagtggacgg aggacgccgc ccaccgggcc ctcctctcgg agaggctcca tcggaacctc 1260 1320 cttaagcgcc tcgagggga ggagaagctc ctttggctct accacgaggt ggaaaagccc 1380 ctctcccggg tcctggccca catggaggcc accggggtac ggcgggacgt ggcctacctt caggecettt eeetggaget tgeggaggag ateegeegee tegaggagga ggtetteege 1440 1500 ttggcgggcc acccettcaa cetcaactee egggaceage tggaaagggt getetttgae 1560 gagettagge ttecegeett gaagaagaeg aagaagaeag geaagegete caccagegee 1620 geggtgetgg aggecetacg ggaggeeeac eccategtgg agaagateet ecageacegg 1680 gageteacea ageteaagaa eacetaegtg gaeeeeetee eaageetegt eeaceegagg 1740 acgggccgcc tccacacccg cttcaaccag acggccacgg ccacggggag gcttagtagc 1800 teegaceeca acetgeagaa cateeeegte egeaceeeet tgggeeagag gateegeegg 1860 gccttcgtgg ccgaggcggg ttgggcgttg gtggccctgg actatagcca gatagagctc 1920 cgcgtcctcg cccacctctc cggggacgaa aacctgatca gggtcttcca ggaggggaag gacatccaca cccagaccgc aagctggatg ttcggcgtcc ccccggaggc cgtggacccc 1980 2040 ctgatgcgcc gggcggccaa gacggtgaac ttcggcgtcc tctacggcat gtccgcccat 2100 aggetetece aggagettge catecectae gaggaggegg tggeetttat agagegetae

ttccaaaqct tccccaaqqt qcqgqcctqq atagaaaaga ccctggagga ggggaggaag 2160 cggggctacg tggaaaccct cttcggaaga aggcgctacg tgcccgacct caacgcccgg 2220 gtgaagagcg tcagggaggc cgcggagcgc atggccttca acatgcccgt ccagggcacc 2280 geogeogace teatgaaget egecatggtg aagetettee ecegeeteeg ggagatgggg 2340 2400 geoegeatge tectocaggt egecaaegag etecteetgg aggeoececa agegegggee gaggaggtgg cggctttggc caaggaggcc atggagaagg cctatcccct cgccgtgccc 2460 ctggaggtgg aggtggggat gggggaggac tggctttccg ccaagggtca ccaccaccac 2520 2526 caccac

<210> 2841

<211> 842

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2841

Met Asn Ser Glu Ala Met Leu Pro Leu Phe Glu Pro Lys Gly Arg Val 1 5 10 15

Leu Leu Val Asp Gly His His Leu Ala Tyr Arg Thr Phe Phe Ala Leu 20 25 30

Lys Gly Leu Thr Thr Ser Arg Gly Glu Pro Val Gln Ala Val Tyr Gly 35 40 45

Phe Ala Lys Ser Leu Leu Lys Ala Leu Lys Glu Asp Gly Tyr Lys Ala 50 55 60

Val Phe Val Val Phe Asp Ala Lys Ala Pro Ser Phe Arg His Glu Ala 65 70 75 80

Tyr Glu Ala Tyr Lys Ala Gly Arg Ala Pro Thr Pro Glu Asp Phe Pro 85 90 95

Arg Gln Leu Ala Leu Ile Lys Glu Leu Val Asp Leu Leu Gly Phe Thr 100 105 110

Arg Leu Glu Val Pro Gly Tyr Glu Ala Asp Asp Val Leu Ala Thr Leu

115	120	125

Ala	Lys 130	Lys	Ala	Glu	Lys	Glu 135	Gly	Tyr	Glu	Val	Arg 140	Ile	Leu	Thr	Ala
Asp 145	Arg	Asp	Leu	Tyr	Gln 150	Leu	Val	Ser	Asp	Arg 155	Val	Ala	Val	Leu	His 160
Pro	Glu	Gly	His	Leu 165	Ile	Thr	Pro	Glu	Trp 170	Leu	Trp	Glu	Lys	Tyr 175	Gly
Leu	Arg	Pro	Glu 180	Gln	Trp	Val	Asp	Phe 185	Arg	Ala	Leu	Val	Gly 190	Asp	Pro
Ser	Asp	Asn 195	Leu	Pro	Gly	Val	Lys 200	Gly	Ile	Gly	Glu	Lys 205	Thr	Ala	Leu
Lys	Leu 210	Leu	Lys	Glu	Trp	Gly 215	Ser	Leu	Glu	Asn	Leu 220	Leu	Lys	Asn	Leu
Asp 225	Arg	Val	Lys	Pro	Glu 230	Asn	Val	Arg	Glu	Lys 235	Ile	Lys	Ala	His	Leu 240
Glu	Asp	Leu	Arg	Leu 245	Ser	Leu	Glu	Leu	Ser 250	Arg	Val	Arg	Thr	Asp 255	Leu
Pro	Leu	Glu	Val 260	Asp	Leu	Ala	Gln.	Gly 265	Arg	Glu	Pro	Asp	Arg 270	Glu	Gly
Leu	Arg	Ala 275	Phe	Leu	Glu	Arg	Leu 280	Glu	Phe	Gly	Ser	Leu 285	Leu	His	Glu
Phe	Gly 290	Leu	Leu	Glu	Ala	Pro 295	Ala	Pro	Leu	Glu	Glu 300	Ala	Pro	Trp	Pro
Pro 305	Pro	Glu	Gly	Ala	Phe 310	Val	Gly	Phe	Val	Leu 315	Ser	Arg	Pro	Glu	Pro 320
Met	Trp	Ala	Glu	Leu 325	Lys	Ala	Leu	Ala	Ala 330	Cys	Arg	Gly	Gly	Arg 335	Val
His	Arg	Ala	Ala 340	Asp	Pro	Leu	Ala	Gly 345	Leu	Lys	Asp	Leu	Lys 350	Glu	Val
Arg	Gly	Leu	Leu	Ala	Lys	Asp	Leu	Ala	Val	Leu	Ala	Ser	Arg	Glu	Gly

Leu	370	Leu	Val	Pro	GIY	375	Asp	Pro	Met	Leu	180 380	Ala	Tyr	Leu	ьeu
Gly 385	Pro	Ser	Asn	Thr	Thr 390	Pro	Glu	Gly	Val	Ala 395	Arg	Arg	Tyr	Gly	Gly 400
Glu	Trp	Thr	Gļu	Asp 405	Ala	Ala	His	Arg	Ala 410	Leu	Leu	Ser	Glu	Arg 415	Leu
His	Arg	Asn	Leu 420	Leu	Lys	Arg	Leu	Glu 425	Gly	Glu	Glu	Lys	Leu 430	Leu	Trp
Leu	Tyr	His 435	Glu	Val	Glu	Lys	Pro 440	Leu	Ser	Arg	Val	Leu 445	Ala	His	Met
Glu	Ala 450	Thr	Gly	Val	Arg	Arg 455	Asp	Val	Ala	Tyr	Leu 460	Gln	Ala	Leu	Ser
Leu 465	Glu	Leu	Ala	Glu	Glu 470	Ile	Arg	Arg	Leu	Glu 475	Glu	Glu	Val	Phe	Arg 480
Leu	Ala	Gly	His	Pro 485	Phe	Asn	Leu	Asn	Ser 490	Arg	Asp	Gln	Leu	Glu 495	Arg
Val	Leu	Phe	Asp 500	Glu	Leu	Arg	Leu	Pro 505	Ala	Leu	Lys	Lys	Thr 510	Lys	Lys
Thr	Gly	Lys 515	Arg	Ser	Thr	Ser	Ala 520	Ala	Val	Leu	Glu	Ala 525	Leu	Arg	Glu
Ala	His 530	Pro	Ile	Val	Glu	Lys 535	Ile	Leu	Gln	His	Arg 540	Glu	Leu	Thr	Lys
Leu 545	Lys	Asn	Thr	Tyr	Val 550	Asp	Pro	Leu	Pro	Ser 555	Leu	Val	His	Pro	Arg 560
Thr	Gly	Arg	Leu	His 565	Thr	Arg	Phe	Asn	Gln 570	Thr	Ala	Thr	Ala	Thr 575	Gly
Arg	Leu	Ser	Ser 580	Ser	Asp	Pro	Asn	Leu 585	Gln	Asn	Ile	Pro	Val 590	Arg	Thr
Pro	Leu	Gly 595	Gln	Arg	Ile	Arg	Arg 600	Ala	Phe	Val	Ala	Glu 605	Ala	Gly	Trp
Ala	Leu 610	Val	Ala	Leu	Asp	Tyr 615	Ser	Gln	Ile	Glu	Leu 620	Arg	Val	Leu	Ala

His Leu Ser Gly Asp Glu Asn Leu Ile Arg Val Phe Gln Glu Gly Lys 635 625 630 Asp Ile His Thr Gln Thr Ala Ser Trp Met Phe Gly Val Pro Pro Glu Ala Val Asp Pro Leu Met Arg Arg Ala Ala Lys Thr Val Asn Phe Gly Val Leu Tyr Gly Met Ser Ala His Arg Leu Ser Gln Glu Leu Ala Ile Pro Tyr Glu Glu Ala Val Ala Phe Ile Glu Arg Tyr Phe Gln Ser Phe Pro Lys Val Arg Ala Trp Ile Glu Lys Thr Leu Glu Glu Gly Arg Lys 720 710 Arg Gly Tyr Val Glu Thr Leu Phe Gly Arg Arg Tyr Val Pro Asp Leu Asn Ala Arg Val Lys Ser Val Arg Glu Ala Ala Glu Arg Met Ala Phe Asn Met Pro Val Gln Gly Thr Ala Ala Asp Leu Met Lys Leu Ala 760 755 Met Val Lys Leu Phe Pro Arg Leu Arg Glu Met Gly Ala Arg Met Leu Leu Gln Val Ala Asn Glu Leu Leu Glu Ala Pro Gln Ala Arg Ala 785 790 Glu Glu Val Ala Ala Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro 805 Leu Ala Val Pro Leu Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu Ser Ala Lys Gly His His His His His 835 840 <210> 2842 <211> 2526

<212> DNA

## <213> Artificial Sequence

## <220>

## <223> Synthetic

·<400> 2842 atgaattccg aggcgatgct tccgctcttt gaacccaaag gccgggtcct cctggtggac 60 120 ggccaccacc tggcctaccg caccttcttc gccctgaagg gcctcaccac gagccggggc gaaccggtgc aggcggtcta cggcttcgcc aagagcctcc tcaaggccct gaaggaggac 180 gggtacaagg ccgtcttcgt ggtctttgac gccaaggccc cctccttccg ccacgaggcc 240 tacgaggeet acaaggeggg gagggeeeeg acceeegagg actteeeeeg geagetegee 300 ctcatcaagg agctggtgga cctcctgggg tttacccgcc tcgaggtccc cggctacgag 360 420 geggaegaeg ttetegeeae eetggeeaag aaggeggaaa aggaggggta egaggtgege 480 atceteaceg eegacegega eetetaceaa etegteteeg acegegtege egteeteeae cccgagggcc acctcatcac cccggagtgg ctttgggaga agtacggcct caggccggag 540 600 cagtgggtgg acttccgcgc cctcgtgggg gacccctccg acaacctccc cggggtcaag 660 ggcatcgggg agaagaccgc cctcaagctc ctcaaggagt ggggaagcct ggaaaacctc 720 ctcaagaacc tggaccgggt aaagccagaa aacgtccggg agaagatcaa ggcccacctg 780 gaagacetea ggeteteett ggagetetee egggtgegea eegaeeteee eetggaggtg gacctcgccc aggggcggga gcccgaccgg gaggggctta gggccttcct ggagaggctg 840 900 gagtteggea geeteeteea egagttegge eteetggagg eeeeegeeee eetggaggag gececetgge eccegegga aggggeette gtgggetteg teeteteeeg eccegagece 960 1020 atgtgggcgg agcttaaagc cctggccgcc tgcaggggcg gccgcgtgca ccgggcagca 1080 gaccccttgg cggggctaaa ggacctcaag gaggtccggg gcctcctcgc caaggacctc 1140 geogtettgg cetegaggga ggggetagae etegtgeeeg gggaegaeee catgeteete 1200 gcctacctcc tggacccttc gaacaccacc cccgaggggg tggcgcggcg ctacgggggg gagtggacgg aggacgccgc ccaccgggcc ctcctctcgg agaggctcca tcggaacctc 1260 1320 cttaagcgcc tcgagggga ggagaagctc ctttggctct accacgaggt ggaaaagccc ctctcccggg tcctggccca catggaggcc accggggtac ggcgggacgt ggcctacctt 1380 caggecettt eeetggaget tgeggaggag ateegeegee tegaggagga ggtetteege 1440 1500 ttggcgggcc acceetteaa ceteaactee egggaceage tggaaagggt getetttgae gagettagge ttecegeett gaagaagaeg aagaagaeag geaagegete caccagegee 1560 geggtgetgg aggecetaeg ggaggeeeae eecategtgg agaagateet eeageaeegg 1620

qaqctcacca aqctcaaqaa cacctacqtq qaccccctcc caaqcctcqt ccacccgagg 1680 1740 acgggccgcc tccacacccg cttcaaccag acggccacgg ccacggggag gcttagtagc tecgaeecca acetgeagaa cateeeegte egeaeeceet tgggeeagag gateegeegg 1800 1860 qccttcqtqq ccqaqqcqqq ttqggcqttq gtggccctgg actatagcca gatagagctc cgcgtcctcg cccacctctc cggggacgaa aacctgatca gggtcttcca ggaggggaag 1920 gacatccaca cccagaccgc aagctggatg ttcggcgtcc ccccggaggc cgtggacccc 1980 ctgatgcgcc gggcggccaa gacggtgaac ttcggcgtcc tctacggcat gtccgcccat 2040 2100 aggetetece aggagettge catecectae gaggaggegg tggeetttat agagegetae ttccaaagct tccccaaggt gcgggcctgg atagaaaaga ccctggagga ggggaggaag 2160 2220 cgqqqctacq tqqaaaccct cttcqqaaqa aggcgctacg tgcccgacct caacgcccgg gtgaagagcg tcagggaggc cgcggagcgc atggccttca acatgcccgt ccagggcacc 2280 gccgccgacc tcatgaagct cgccatggtg aagctcttcc cccgcctccg ggagatgggg 2340 gcccgcatgc tcctccaggt cgccaacgag ctcctcctgg aggcccccca agcgcgggcc 2400 gaggaggtgg cggctttggc caaggaggcc atggagaagg cctatcccct cgccgtgccc 2460 2520 ctggaggtgg aggtggggat gggggaggac tggctttccg ccaagggtca ccaccaccac 2526 caccac

<210> 2843

<211> 842

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2843

Met Asn Ser Glu Ala Met Leu Pro Leu Phe Glu Pro Lys Gly Arg Val 1 5 10 15

Leu Leu Val Asp Gly His His Leu Ala Tyr Arg Thr Phe Phe Ala Leu 20 25 30

Lys Gly Leu Thr Thr Ser Arg Gly Glu Pro Val Gln Ala Val Tyr Gly 35 40 45

Phe Ala Lys Ser Leu Leu Lys Ala Leu Lys Glu Asp Gly Tyr Lys Ala

Val 65	Phe	Val	Val	Phe	Asp 70	Ala	Lys	Ala	Pro	Ser 75	Phe	Arg	His	Glu	Ala 80
Tyr	Glu	Ala	Tyr	Lys 85	Ala	Gly	Arg	Ala	Pro 90	Thr	Pro	Glu	Asp	Phe 95	Pro
Arg	Gln	Leu	Ala 100	Leu	Ile	Lys	Glu	Leu 105	Val	Asp	Leu	Leu	Gly 110	Phe	Thr
Arg	Leu	Glu 115	Val	Pro	Gly	Tyr	Glu 120	Ala	Asp	Asp	Val	Leu 125	Ala	Thr	Leu
Ala	Lys 130	Lys	Ala	Glu	Lys	Glu 135	Gly	Tyr	Glu	Val	Arg 140	Ile	Leu	Thr	Ala
Asp 145	Arg	Asp	Leu	Tyr	Gln 150	Leu	Val	Ser	Asp	Arg 155	Val	.Ala	Val	Leu	His 160
Pro	Glu	Gly	His	Leu 165	Ile	Thr	Pro	Glu	Trp 170	Leu	Trp	Glu	Lys	Tyr 175	Gly
Leu	Arg	Pro	Glu 180	Gln	Trp	Val	Asp	Phe 185	Arg	Ala	Leu	Val	Gly 190	Asp	Pro
Ser	Asp	Asn 195	Leu	Pro	Gly	Val	Lys 200	Gly	Ile	Gly	Glu	Lys 205	Thr	Ala	Leu
Lys	Leu 210	Leu	Lys	Glu	Trp	Gly 215	Ser	Leu	Glu	Asn	Leu 220	Leu	Lys	Asn	Leu
Asp 225	Arg	Val	Lys	Pro	Glu 230	Asn	Val	Arg	Glu	Lys 235	Ile	Lys	Ala	His	Leu 240
Glu	Asp	Leu	Arg	Leu 245	Ser	Leu	Glu	Leu	Ser 250	Arg	Val	Arg	Thr	Asp 255	Leu
Pro	Leu	Glu	Val 260	Asp	Leu	Ala	Gln	Gly 265	Arg	Glu	Pro	Asp	Arg 270	Glu	Gly
Leu	Arg	Ala 275	Phe	Leu	Glu	Arg	Leu 280	Glu	Phe	Gly	Ser	Leu 285	Leu	His	Glu
Phe	Gly 290	Leu	Leu	Glu	Ala	Pro 295	Ala	Pro	Leu	Glu	Glu 300	Ala	Pro	Trp	Pro

305	Pro	GIU	GIA	Ala	310	vai	GIY	Pne	vai	315	ser	Arg	PIO	GIU	320
Met	Trp	Ala	Glu	Leu 325	Lys	Ala	Leu	Ala	Ala 330	Cys	Arg	Gly	Gly	Arg 335	Val
His	Arg	Ala	Ala 340	Asp	Pro	Leu	Ala	Gly 345	Leu	Lys	Asp	Leu	Lys 350	Glu	Val
Arg	Gly	Leu 355	Leu	Ala	Lys	Asp	Leu 360	Ala	Val	Leu	Ala	Ser 365	Arg	Glu	Gly
Leu	Asp 370	Leu	Val	Pro	Gly	Asp 375	Asp	Pro	Met	Leu	Leu 380	Ala	Tyr	Leu	Leu
Asp 385	Pro	Ser	Asn	Thr	Thr 390	Pro	Glu	Gly	Val	Ala 395	Arg	Arg	Tyr	Gly	Gly 4.00
Glu	Trp	Thr	Glu	Asp 405	Ala	Ala	His	Arg	Ala 410	Leu	Leu	Ser	Glu	Arg 415	Leu
His	Arg	Asn	Leu 420	Leu	Lys	Arg	Leu	Glu 425	Gly	Glu	Glu	Lys	Leu 430	Leu	Trp
Leu	Tyr	His 435	Glu	Val	Glu	Lys	Pro 440	Leu	Ser	Arg	Val	Leu 445	Ala	His	Met
Glu	Ala 450	Thr	Gly	Val	Arg	Arg 455	Asp	Val	Ala	Tyr	Leu 460	Gln	Ala	Leu	Ser
Leu 465	Glu	Leu	Ala	Glu	Glu 470	Ile	Arg	Arg	Leu	Glu 475	Glu	Glu	Val	Phe	Arg 480
Leu	Ala	Gly	His	Pro 485	Phe	Asn	Leu	Asn	Ser 490	Arg	Asp	Gln	Leu	Glu 495	Arg
Val	Leu	Phe	Asp 500	Glu	Leu	Arg	Leu	Pro 505	Ala	Leu	Lys	Lys	Thr 510	Lys	Lys
Thr	Gly	Lys 515	Arg	Ser	Thr	Ser	Ala 520	Ala	Val	Leu	Glu	Ala 525	Leu	Arg	Glu
Ala	His 530	Pro	Ile	Val	Glu	Lys 535	Ile	Leu	Gln	His	Arg 540	Glu	Leu	Thr	Lys
Leu 545	Lys	Asn	Thr	Tyr	Val 550	Asp	Pro	Leu	Pro	Ser 555	Leu	Val	His	Pro	Arg 560

Thr	Gly	Arg	Leu	His 565	Thr	Arg	Phe	Asn	Gln 570	Thr	Ala	Thr	Ala	Thr 575	Gly
Arg	Leu	Ser	Ser 580	Ser	Asp	Pro	Asn	Leu 585	Gln	Asn	Ile	Pro	Val 590	Arg	Thr
Pro	Leu	Gly 595	Gln	Arg	Ile	Arg	Arg 600	Ala	Phe	Val	Ala	Glu 605	Ala	Gly	Trp
Ala	Leu 610	Val	Ala	Leu	Asp	Tyr 615	Ser	Gln	Ile	Glu	Leu 620	Arg	Val	Leu	Ala
His 625	Leu	Ser	Gly	Asp	Glu 630	Asn	Leu	Ile	Arg	Val 635	Phe	Gln	Glu	Gly	Lys 640
Asp	Ile	His	Thr	Gln 645	Thr	Ala	Ser	Trp	Met 650	Phe	Gly	Val	Pro	Pro 655	Glu
Ala	Val	Asp	Pro 660	Leu	Met	Arg	Arg	Ala 665	Ala	Lys	Thr	Val	Asn 670	Phe	Gly
Val	Leu	Tyr 675	Gly	Met	Ser	Ala	His 680	Arg	Leu	Ser	Gln	Glu 685	Leu	Ala	Ile
Pro	Tyr 690	Glu	Glu	Ala	Val	Ala 695	Phe	Ile	Glu	Arg	Tyr 700	Phe	Gln	Ser	Phe
Pro 705	Lys	Val	Arg	Ala	Trp 710	Ile	Glu	Lys	Thr	Leu 715	Glu	Glu	Gly	Arg	Lys 720
Arg	Gly	Tyr	Val	Glu 725	Thr	Leu	Phe	Gly	Arg 730	Arg	Arg	Tyr	Val	Pro 735	Asp
Leu	Asn	Ala	Arg 740	Val	Lys	Ser	Val	Arg 745	Glu	Ala	Ala	Glu	Arg 750	Met	Ala
Phe	Asn	Met 755	Pro	Val	Gln	Gly	Thr 760	Ala	Ala	Asp	Leu	Met 765	Lys	Leu	Ala
Met	Val 770	Lys	Leu	Phe	Pro	Arg 775	Leu	Arg	Glu	Met	Gly 780	Ala	Arg	Met	Leu
Leu 785	Gln	Val	Ala	Asn	Glu 790	Leu	Leu	Leu	Glu	Ala 795	Pro	Gln	Ala	Arg	Ala 800
Glu	Glu	Val	Ala	Ala	Leu	Ala	Lys	Glu	Ala	Met	Glu	Lys	Ala	Tyr	Pro

810 815 805

Leu Ala Val Pro Leu Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu

Ser Ala Lys Gly His His His His His

<210> 2844

<211> 2526

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> atgaatteeg aggegatget teegetettt gaacceaaag geegggteet eetggtggae 120 ggccaccacc tggcctaccg cacccgcttc gccctgaagg gcctcaccac gagccggggc 180 gaaccggtgc aggcggtcta cggcttcgcc aagagcctcc tcaaggccct gaaggaggac gggtacaagg ccgtcttcgt ggtctttgac gccaaggccc cctccttccg ccacgaggcc 240 300 tacgaggcct acaaggcggg gagggccccg acccccgagg acttcccccg gcagctcgcc 360 ctcatcaagg agctggtgga cctcctgggg tttacccgcc tcgaggtccc cggctacgag gcggacgacg ttctcgccac cctggccaag aaggcggaaa aggaggggta cgaggtgcgc 420 480 atceteaceg cegacegega cetetaceaa etegteteeg acegegtege egteeteeae 540 cccgagggcc acctcatcac cccggagtgg ctttgggaga agtacggcct caggccggag cagtgggtgg acttccgcgc cctcgtgggg gacccctccg acaacctccc cggggtcaag 600 660 ggcatcgggg agaagaccgc cctcaagctc ctcaaggagt ggggaagcct ggaaaacctc 720 ctcaagaacc tggaccgggt aaagccagaa aacgtccggg agaagatcaa ggcccacctg 780 gaagacetca ggeteteett ggagetetee egggtgegea eegaeeteee eetggaggtg 840 gacctcgccc aggggcggga gcccgaccgg gaggggctta gggccttcct ggagaggctg 900 gagtteggea gcetecteea egagttegge etcetggagg ecceegeece eetggaggag 960 geoccetgge eccegegga aggggeette gtgggetteg teeteteeg eccegageee 1020 atgtgggegg agettaaage eetggeegee tgeaggggeg geegegtgea eegggeagea

60

1080

gacccettgg cggggctaaa ggacctcaag gaggtccggg gcctcctcgc caaggacctc

gccgtcttgg	cctcgaggga	ggggctagac	ctcgtgcccg	gggacgaccc	catgctcctc	1140
gcctacctcc	tgggcccctc	caacaccacc	cccgaggggg	tggcgcggcg	ctacgggggg	1200
gagtggacgg	aggacgccgc	ccaccgggcc	ctcctctcgg	agaggctcca	tcggaacctc	1260
cttaagcgcc	tcgaggggga	ggagaagctc	ctttggctct	accacgaggt	ggaaaagccc	1320
ctctcccggg	tcctggccca	catggaggcc	accggggtac	ggctggacgt	ggcctacctt	1380
caggcccttt	ccctggagct	tgcggaggag	atccgccgcc	tcgaggagga	ggtcttccgc	1440
ttggcgggcc	accccttcaa	cctcaactcc	cgggaccagc	tggaaagggt	gctctttgac	1500
gagcttaggc	ttcccgcctt	gaagaagacg	aagaagacag	gcaagcgctc	caccagcgcc	1560
gcggtgctgg	aggccctacg	ggaggcccac	cccatcgtgg	agaagatcct	ccagcaccgg	1620
gagctcacca	agctcaagaa	cacctacgtg	gaccccctcc	caagcctcgt	ccacccgagg	1680
acgggccgcc	tccacacccg	cttcaaccag	acggccacgg	ccacggggag	gcttagtagc	1740
tccgacccca	acctgcagaa	catccccgtc	cgcaccccct	tgggccagag	gatccgccgg	1800
gccttcgtgg	ccgaggcggg	ttgggcgttg	gtggccctgg	actatagcca	gatagagctc	1860
cgcgtcctcg	cccacctctc	cggggacgaa	aacctgatca	gggtcttcca	ggagggaag	1920
gacatccaca	cccagaccgc	aagctggatg	ttcggcgtcc	ccccggaggc	cgtggacccc	1980
ctgatgcgcc	gggcggccaa	gacggtgaac	ttcggcgtcc	tctacggcat	gtccgcccat	2040
aggctctccc	aggagcttgc	catcccctac	gaggaggcgg	tggcctttat	agagcgctac	2100
ttccaaagct	tccccaaggt	gcgggcctgg	atagaaaaga	ccctggagga	ggggaggaag	2160
cggggctacg	tggaaaccct	cttcggaaga	aggcgctacg	tgcccgacct	caacgcccgg	2220
gtgaagagcg	tcagggaggc	cgcggagcgc	atggccttca	acatgcccgt	ccagggcacc	2280
gccgccgacc	tcatgaagct	cgccatggtg	aagctcttcc	cccgcctccg	ggagatgggg	2340
gcccgcatgc	tcctccaggt	cgccaacgag	ctcctcctgg	aggcccccca	agcgcgggcc	2400
gaggaggtgg	cggctttggc	caaggaggcc	atggagaagg	cctatcccct	cgccgtgccc	2460
ctggaggtgg	aggtggggat	gggggaggac	tggctttccg	ccaagggtca	ccaccaccac	2520
caccac						2526

<sup>&</sup>lt;210> 2845

<sup>&</sup>lt;211> 842

<sup>&</sup>lt;212> PRT

<sup>&</sup>lt;213> Artificial Sequence

<223> Synthetic

<400> 2845

Met Asn Ser Glu Ala Met Leu Pro Leu Phe Glu Pro Lys Gly Arg Val 1 5 10 15

Leu Leu Val Asp Gly His His Leu Ala Tyr Arg Thr Arg Phe Ala Leu 20 25 30

Lys Gly Leu Thr Thr Ser Arg Gly Glu Pro Val Gln Ala Val Tyr Gly 35 40 45

Phe Ala Lys Ser Leu Leu Lys Ala Leu Lys Glu Asp Gly Tyr Lys Ala 50 55 60

Val Phe Val Val Phe Asp Ala Lys Ala Pro Ser Phe Arg His Glu Ala 65 70 75 80

Tyr Glu Ala Tyr Lys Ala Gly Arg Ala Pro Thr Pro Glu Asp Phe Pro 85 90 95

Arg Gln Leu Ala Leu Ile Lys Glu Leu Val Asp Leu Leu Gly Phe Thr 100 105 110

Arg Leu Glu Val Pro Gly Tyr Glu Ala Asp Asp Val Leu Ala Thr Leu 115 120 125

Ala Lys Lys Ala Glu Lys Glu Gly Tyr Glu Val Arg Ile Leu Thr Ala 130 135 140

Asp Arg Asp Leu Tyr Gln Leu Val Ser Asp Arg Val Ala Val Leu His 145 150 155 160

Pro Glu Gly His Leu Ile Thr Pro Glu Trp Leu Trp Glu Lys Tyr Gly
165 170 175

Leu Arg Pro Glu Gln Trp Val Asp Phe Arg Ala Leu Val Gly Asp Pro 180 185 190

Ser Asp Asn Leu Pro Gly Val Lys Gly Ile Gly Glu Lys Thr Ala Leu 195 200 205

Lys Leu Leu Lys Glu Trp Gly Ser Leu Glu Asn Leu Leu Lys Asn Leu 210 220

Asp Arg Val Lys Pro Glu Asn Val Arg Glu Lys Ile Lys Ala His Leu 225 230 235 240

Glu	Asp	Leu	Arg	Leu 245	Ser	Leu	Glu	Leu	Ser 250	Arg	Val	Arg	Thr	Asp 255	Leu

Pro Leu Glu Val Asp Leu Ala Gln Gly Arg Glu Pro Asp Arg Glu Gly 260 265 270

Leu Arg Ala Phe Leu Glu Arg Leu Glu Phe Gly Ser Leu Leu His Glu 275 280 285

Phe Gly Leu Leu Glu Ala Pro Ala Pro Leu Glu Glu Ala Pro Trp Pro 290 295 300

Pro Pro Glu Gly Ala Phe Val Gly Phe Val Leu Ser Arg Pro Glu Pro 305 310 315

Met Trp Ala Glu Leu Lys Ala Leu Ala Ala Cys Arg Gly Gly Arg Val 325 330 335

His Arg Ala Ala Asp Pro Leu Ala Gly Leu Lys Asp Leu Lys Glu Val 340 345 350

Arg Gly Leu Leu Ala Lys Asp Leu Ala Val Leu Ala Ser Arg Glu Gly 355 360 365

Leu Asp Leu Val Pro Gly Asp Asp Pro Met Leu Leu Ala Tyr Leu Leu 370 380

Gly Pro Ser Asn Thr Thr Pro Glu Gly Val Ala Arg Arg Tyr Gly Gly 385 395 400

Glu Trp Thr Glu Asp Ala Ala His Arg Ala Leu Leu Ser Glu Arg Leu
405 410 415

His Arg Asn Leu Leu Lys Arg Leu Glu Glu Glu Lys Leu Leu Trp 420 425 430

Leu Tyr His Glu Val Glu Lys Pro Leu Ser Arg Val Leu Ala His Met 435 440 445

Glu Ala Thr Gly Val Arg Leu Asp Val Ala Tyr Leu Gln Ala Leu Ser 450 . 455 . 460

Leu Glu Leu Ala Glu Glu Ile Arg Arg Leu Glu Glu Glu Val Phe Arg 465 470 475 480

Leu Ala Gly His Pro Phe Asn Leu Asn Ser Arg Asp Gln Leu Glu Arg

Val Leu Phe Asp Glu Leu Arg Leu Pro Ala Leu Lys Lys Thr Lys Lys 500 505 510

Thr Gly Lys Arg Ser Thr Ser Ala Ala Val Leu Glu Ala Leu Arg Glu
515 520 525

Ala His Pro Ile Val Glu Lys Ile Leu Gln His Arg Glu Leu Thr Lys 530 540

Leu Lys Asn Thr Tyr Val Asp Pro Leu Pro Ser Leu Val His Pro Arg 545 550 555 560

Thr Gly Arg Leu His Thr Arg Phe Asn Gln Thr Ala Thr Ala Thr Gly 565 570 575

Arg Leu Ser Ser Ser Asp Pro Asn Leu Gln Asn Ile Pro Val Arg Thr 580 585 590

Pro Leu Gly Gln Arg Ile Arg Arg Ala Phe Val Ala Glu Ala Gly Trp 595 600 605

Ala Leu Val Ala Leu Asp Tyr Ser Gln Ile Glu Leu Arg Val Leu Ala 610 615 620

His Leu Ser Gly Asp Glu Asn Leu Ile Arg Val Phe Gln Glu Gly Lys 625 630 635 640

Asp Ile His Thr Gln Thr Ala Ser Trp Met Phe Gly Val Pro Pro Glu 645 650 655

Ala Val Asp Pro Leu Met Arg Arg Ala Ala Lys Thr Val Asn Phe Gly 660 665 670

Val Leu Tyr Gly Met Ser Ala His Arg Leu Ser Gln Glu Leu Ala Ile 675 680 685

Pro Tyr Glu Glu Ala Val Ala Phe Ile Glu Arg Tyr Phe Gln Ser Phe 690 695 700

Pro Lys Val Arg Ala Trp Ile Glu Lys Thr Leu Glu Glu Gly Arg Lys 705 710 715 720

Arg Gly Tyr Val Glu Thr Leu Phe Gly Arg Arg Arg Tyr Val Pro Asp 725 730 735

Leu Asn Ala Arq Val Lys Ser Val Arg Glu Ala Ala Glu Arg Met Ala 740 Phe Asn Met Pro Val Gln Gly Thr Ala Ala Asp Leu Met Lys Leu Ala Met Val Lys Leu Phe Pro Arg Leu Arg Glu Met Gly Ala Arg Met Leu 770 Leu Gln Val Ala Asn Glu Leu Leu Leu Glu Ala Pro Gln Ala Arg Ala 785 790 Glu Glu Val Ala Ala Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro Leu Ala Val Pro Leu Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu Ser Ala Lys Gly His His His His His His <210> 2846 <211> 2526 <212> DNA <213> Artificial Sequence <220> <223> Synthetic <400> atgaattccg aggcgatgct tccgctcttt gaacccaaag gccgggtcct cctggtggac 60 ggccaccacc tggcctaccg cacccgccac gccctgaagg gcctcaccac gagccggggc 120 qaaccqqtqc aqqcqtcta cqqcttcqcc aagaqcctcc tcaaggccct gaaggaggac 180 gggtacaagg ccgtcttcgt ggtctttgac gccaaggccc cctccttccg ccacgaggcc 240 300 tacqaqqcct acaaqgcggg gagggccccg acccccgagg acttcccccg gcagctcgcc ctcatcaagg agctggtgga cctcctgggg tttacccgcc tcgaggtccc cggctacgag 360 geggaegaeg ttetegeeae eetggeeaag aaggeggaaa aggaggggta egaggtgege 420 480 atceteaceg cegacegega cetetaceaa etegteteeg acegegtege egteeteeae

540 600

cccgagggcc acctcatcac cccggagtgg ctttgggaga agtacggcct caggccggag

cagtgggtgg acttccgcgc cctcgtgggg gacccctccg acaacctccc cggggtcaag

ggcatcgggg agaagaccgc cctcaagctc ctcaaggagt ggggaagcct ggaaaacctc 660 720 ctcaagaacc tggaccgggt aaagccagaa aacgtccggg agaagatcaa ggcccacctg gaagacetea ggeteteett ggagetetee egggtgegea eegaceteee eetggaggtg 780 gacctcgccc aggggcggga gcccgaccgg gaggggctta gggccttcct ggagaggctg 840 900 gagtteggea geeteeteea egagttegge eteetggagg eeeeegeeee eetggaggag gcccctggc ccccgccgga aggggccttc gtgggcttcg tcctctcccg ccccgagccc 960 atgtgggcgg agcttaaagc cctggccgcc tgcaggggcg gccgcgtgca ccgggcagca 1020 1080 gaccccttgg cggggctaaa ggacctcaag gaggtccggg gcctcctcgc caaggacctc 1140 geogtettgg cetegaggga ggggetagae etegtgeeeg gggaegaeee catgeteete 1200 gectacetee tgggeceete caacaceaee eeegagggg tggegeggeg etacgggggg 1260 gagtggacgg aggacgccgc ccaccgggcc ctcctctcgg agaggctcca tcggaacctc 1320 cttaagcgcc tcgagggga ggagaagctc ctttggctct accacgaggt ggaaaagccc ctctcccggg tcctggccca catggaggcc accggggtac ggctggacgt ggcctacctt 1380 1440 caggecettt eeetggaget tgeggaggag ateegeegee tegaggagga ggtetteege 1500 ttggcgggcc accecttcaa cetcaaetee egggaccage tggaaagggt getetttgae 1560 gagettagge ttecegeett gaagaagaeg aagaagaeag geaagegete caccagegee geggtgetgg aggeectaeg ggaggeecae eccategtgg agaagateet eeageaeegg 1620 1680 gageteacea ageteaagaa eacetaegtg gaceeettee eaageetegt eeaceegagg 1740 acgggccgcc tccacacccg cttcaaccag acggccacgg ccacggggag gcttagtagc tecgaeeeca acetgeagaa cateeeegte egeaeeeeet tgggeeagag gateegeegg 1800 1860 gccttcgtgg ccgaggcggg ttgggcgttg gtggccctgg actatagcca gatagagctc 1920 egegteeteg eecacetete eggggaegaa aacetgatea gggtetteea ggaggggaag gacatccaca cccagaccgc aagctggatg ttcggcgtcc ccccggaggc cgtggacccc 1980 2040 ctgatgcgcc gggcggccaa gacggtgaac ttcggcgtcc tctacggcat gtccgcccat 2100 aggetetece aggagettge cateceetae gaggaggegg tggeetttat agagegetae 2160 ttccaaagct tccccaaggt gcgggcctgg atagaaaaga ccctggagga ggggaggaag 2220 cggggctacg tggaaaccct cttcggaaga aggcgctacg tgcccgacct caacgcccgg 2280 gtgaagagcg tcagggaggc cgcggagcgc atggccttca acatgcccgt ccagggcacc 2340 gccgccgacc tcatgaagct cgccatggtg aagctcttcc cccgcctccg ggagatgggg 2400 geoegeatge teeteeaggt egecaaegag eteeteetgg aggeeeeca agegegggee

gaggaggtgg cggctttggc caaggaggcc atggagaagg cctatcccct cgccgtgccc

2460

caccac

<210> 2847

<211> 842

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2847

Met Asn Ser Glu Ala Met Leu Pro Leu Phe Glu Pro Lys Gly Arg Val 1 5 10 15

Leu Leu Val Asp Gly His His Leu Ala Tyr Arg Thr Arg His Ala Leu 20 25 30

Lys Gly Leu Thr Thr Ser Arg Gly Glu Pro Val Gln Ala Val Tyr Gly 35 40 45

Phe Ala Lys Ser Leu Leu Lys Ala Leu Lys Glu Asp Gly Tyr Lys Ala 50 55 60

Val Phe Val Val Phe Asp Ala Lys Ala Pro Ser Phe Arg His Glu Ala 65 70 75 80

Tyr Glu Ala Tyr Lys Ala Gly Arg Ala Pro Thr Pro Glu Asp Phe Pro 85 90 95

Arg Gln Leu Ala Leu Ile Lys Glu Leu Val Asp Leu Leu Gly Phe Thr 100 105 110

Arg Leu Glu Val Pro Gly Tyr Glu Ala Asp Asp Val Leu Ala Thr Leu 115 120 125

Ala Lys Lys Ala Glu Lys Glu Gly Tyr Glu Val Arg Ile Leu Thr Ala 130 135 140

Asp Arg Asp Leu Tyr Gln Leu Val Ser Asp Arg Val Ala Val Leu His 145 150 155 160

Pro Glu Gly His Leu Ile Thr Pro Glu Trp Leu Trp Glu Lys Tyr Gly

Leu	Arg	Pro	Glu 180	Gln	Trp	Val	Asp	Phe 185	Arg	Ala	Leu	Val	Gly 190	Asp	Pro
Ser	Asp	Asn 195	Leu	Pro	Gly	Val	Lys 200	Gly	Ile	Gly	Glu	Lys 205	Thr	Ala	Leu
Lys	Leu 210	Leu	Lys	Glu	Trp	Gly 215	Ser	Leu	Glu	Asn	Leu 220	Leu	Lys	Asn	Leu
Asp 225	Arg	Val	Lys	Pro	Glu 230	Asn	Val	Arg	Glu	Lys 235	Ile	Lys	Ala	His	Leu 240
Glu	Asp	Leu	Arg	Leu 245	Ser	Leu	Glu	Leu	Ser 250	Arg	Val	Arg	Thr	Asp 255	Leu
Pro	Leu	Glu	Val 260	Asp	Leu	Ala	Gln	Gly 265	Arg	Glu	Pro	Asp	Arg 270	Glu	Gly
Leu	Arg	Ala 275	Phe	Leu	Glu	Arg	Leu 280	Glu	Phe	Gly	Ser	Leu 285	Leu	His	Glu
Phe	Gly 290	Leu	Leu	Glu	Ala	Pro 295	Ala	Pro	Leu	Glu	Glu 300	Ala	Pro	Trp	Pro
Pro 305	Pro	Glu	Gly	Ala	Phe 310	Val	Gly	Phe	Val	Leu 315	Ser	Arg	Pro	Glu	Pro 320
Met	Trp	Ala	Glu	Leu 325	Lys	Ala	Leu	Ala	Ala 330	Cys	Arg	Gly	Gly	Arg 335	Val
His	Arg	Ala	Ala 340	Asp	Pro	Leu	Ala	Gly 345	Leu	Lys	Asp	Leu	Lys 350	Glu	Val
Arg	Gly	Leu 355	Leu	Ala	Lys	Asp	Leu 360	Ala	Val	Leu	Ala	Ser 365	Arg	Glu	Gly
Leu	Asp 370	Leu	Val	Pro	Gly	Asp 375	Asp	Pro	Met	Leu	Leu 380	Ala	Tyr	Leu	Leu
Gly 385	Pro	Ser	Asn	Thr	Thr 390	Pro	Glu	Gly	Val	Ala 395	Arg	Arg	Tyr	Gly	Gly 400
Glu	Trp	Thr	Glu	Asp 405	Ala	Ala	His	Arg	Ala 410	Leu	Leu	Ser	Glu	Arg 415	Leu

His	Arg	Asn	Leu 420	Leu	Lys	Arg	Leu	Glu 425	Gly	Glu	Glu	Lys	Leu 430	Leu	Trp
Leu	Tyr	His 435	Glu	Val	Glu	Lys.	Pro 440	Leu	Ser	Arg	Val	Leu 445	Ala	His	Met
Glu	Ala 450	Thr	Gly	Val	Arg	Leu 455	Asp	Val	Ala	Tyr	Leu 460	Gln	Ala	Leu	Ser
Leu 465	Glu	Leu	Ala	Glu	Glu 470	Ile	Arg	Arg	Leu	Glu 475	Glu	Glu	Val	Phe	Arg 480
Leu	Ala	Gly	His	Pro 485	Phe	Asn	Leu	Asn	Ser 490	Arg	Asp	Gln	Leu	Glu 495	Arg
Val	Leu	Phe	Asp 500	Glu	Leu	Arg	Leu	Pro 505	Ala	Leu	Lys	Lys	Thr 510	Lys	Lys
Thr	Gly	Lys 515	Arg	Ser	Thr	Ser	Ala 520	Ala	Val	Leu	Glu	Ala 525	Leu	Arg	Glu
Ala	His 530	Pro	Ile	Val	Glu	Lys 535	Ile	Leu	Gln	His	Arg 540	Glu	Leu	Thr	Lys
Leu 545	Lys	Asn	Thr	Tyr	Val 550	Asp	Pro	Leu	Pro	Ser 555	Leu	Val	His	Pro	Arg 560
Thr	Gly	Arg	Leu	His 565	Thr	Arg	Phe	Asn	Gln 570	Thr	Ala	Thr	Ala	Thr 575	Gly
Arg	Leu	Ser	Ser 580	Ser	Asp	Pro	Asn	Leu 585	Gln	Asn	Ile	Pro	Val 590	Arg	Thr
Pro	Leu	Gly 595	Gln	Arg	Ile	Arg	Arg 600	Ala	Phe	Val	Ala	Glu 605	Ala	Gly	Trp
Ala	Leu 610	Val	Ala	Leu	Asp	Tyr 615	Ser	Gln	Ile	Glu	Leu 620	Arg	Val	Leu	Ala
His 625	Leu	Ser	Gly	Asp	Glu 630	Asn	Leu	Ile	Arg	Val 635	Phe	Gln	Glu	Gly	Lys 640
Asp	Ile	His	Thr	Gln 645	Thr	Ala	Ser	Trp	Met 650	Phe	Gly	Val	Pro	Pro 655	Glu
Ala	Val	Asp	Pro	Leu	Met	Arg	Arg	Ala	Ala	Lys	Thr	Val	Asn 670	Phe	Gly

Val Leu Tyr Gly Met Ser Ala His Arg Leu Ser Gln Glu Leu Ala Ile 675 680 685

Pro Tyr Glu Glu Ala Val Ala Phe Ile Glu Arg Tyr Phe Gln Ser Phe 690 695 700

Pro Lys Val Arg Ala Trp Ile Glu Lys Thr Leu Glu Glu Gly Arg Lys 705 710 715 720

Arg Gly Tyr Val Glu Thr Leu Phe Gly Arg Arg Tyr Val Pro Asp 725 730 735

Leu Asn Ala Arg Val Lys Ser Val Arg Glu Ala Ala Glu Arg Met Ala 740 745 750

Phe Asn Met Pro Val Gln Gly Thr Ala Ala Asp Leu Met Lys Leu Ala 755 760 765

Met Val Lys Leu Phe Pro Arg Leu Arg Glu Met Gly Ala Arg Met Leu 770 780

Leu Gln Val Ala Asn Glu Leu Leu Glu Ala Pro Gln Ala Arg Ala 785 790 795 800

Glu Glu Val Ala Ala Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro 805 810 815

Leu Ala Val Pro Leu Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu 820 825 830

Ser Ala Lys Gly His His His His His His 835

<210> 2848

<211> 2526

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2848
atgaattccg aggcgatgct tccgctcttt gaacccaaag gccgggtcct cctggtggac

120 ggccaccacc tggcctaccg cacccgccgc gccctgaagg gcctcaccac gagccggggc 180 gaaccggtgc aggcggtcta cggcttcgcc aagagcetcc tcaaggccct gaaggaggac gggtacaagg ccgtcttcgt ggtctttgac gccaaggccc cctccttccg ccacgaggcc 240 tacgaggeet acaaggeggg gagggeeeeg acceeegagg actteeeeeg geagetegee 300 ctcatcaagg agctggtgga cctcctgggg tttacccgcc tcgaggtccc cggctacgag 360 geggaegaeg ttetegeeae eetggeeaag aaggeggaaa aggaggggta egaggtgege 420 480 atceteaceg cegacegega cetetaceaa etegteteeg acegegtege egteeteeac 540 cccgagggcc acctcatcac cccggagtgg ctttgggaga agtacggcct caggccggag 600 cagtgggtgg acttccgcgc cctcgtgggg gacccctccg acaacctccc cggggtcaag 660 ggcatcgggg agaagaccgc cctcaagctc ctcaaggagt ggggaagcct ggaaaacctc 720 ctcaagaacc tggaccgggt aaagccagaa aacgtccggg agaagatcaa ggcccacctg 780 gaagacetca ggeteteett ggagetetee egggtgegea eegaceteee eetggaggtg 840 gacctcgccc aggggcggga gcccgaccgg gaggggctta gggccttcct ggagaggctg 900 gagttcggca gcctcctcca cgagttcggc ctcctggagg cccccgcccc cctggaggag 960 geceetgge eeeggegga aggggeette gtgggetteg teeteteeeg eeeegageee atgtgggcgg agettaaage cetggeegee tgeaggggeg geegegtgea eegggeagea 1020 gaccccttgg cggggctaaa ggacctcaag gaggtccggg gcctcctcgc caaggacctc 1080 1140 geogtettgg cetegaggga ggggetagae etegtgeeeg gggaegaeee catgeteete gcctacctcc tgggcccctc caacaccacc cccgaggggg tggcgcggcg ctacgggggg 1200 gagtggacgg aggacgccgc ccaccgggcc ctcctctcgg agaggctcca tcggaacctc 1260 cttaagcgcc tcgaggggga ggagaagctc ctttggctct accacgaggt ggaaaagccc 1320 1380 ctctcccggg tcctggccca catggaggcc accggggtac ggctggacgt ggcctacctt caggecettt eeetggaget tgeggaggag ateegeegee tegaggagga ggtetteege 1440 ttggcgggcc accectteaa ceteaactee egggaceage tggaaagggt getetttgae 1500 1560 gagettagge ttecegeett gaagaagaeg aagaagaeag geaagegete caceagegee geggtgetgg aggeeetaeg ggaggeeeae eecategtgg agaagateet eeageaeegg 1620 16.80 gageteacca ageteaagaa cacetaegtg gaceceetee caageetegt ecaceegagg 1740 acgggccgcc tccacacccg cttcaaccag acggccacgg ccacggggag gcttagtagc tecgaeeeca acetgeagaa eateeeegte egeaeeeeet tgggeeagag gateegeegg 1800 1860 gccttcgtgg ccgaggcggg ttgggcgttg gtggccctgg actatagcca gatagagctc

1920

cgcgtcctcg cccacctctc cggggacgaa aacctgatca gggtcttcca ggaggggaag

qacatccaca cccagaccgc aagctggatg ttcggcgtcc ccccggaggc cgtggacccc 1980 ctgatgcgcc gggcggccaa gacggtgaac ttcggcgtcc tctacggcat gtccgcccat 2040 aggetetece aggagettge catecectae gaggaggegg tggeetttat agagegetae 2100 2160 ttccaaagct tccccaaggt gcgggcctgg atagaaaaga ccctggagga ggggaggaag cggggctacg tggaaaccct cttcggaaga aggcgctacg tgcccgacct caacgcccgg 2220 gtqaagagcg tcagggaggc cgcggagcgc atggccttca acatgcccgt ccagggcacc 2280 gccgccgacc tcatgaaqct cgccatggtg aagctcttcc cccgcctccg ggagatgggg 2340 geoegeatge teetecaggt egecaaegag eteeteetgg aggeeecea agegegggee 2400 gaggaggtgg cggctttggc caaggaggcc atggagaagg cctatcccct cgccgtgccc 2460 2520 ctggaggtgg aggtggggat gggggaggac tggctttccg ccaagggtca ccaccaccac 2526 caccac

<210> 2849

<211> 842

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2849

Met Asn Ser Glu Ala Met Leu Pro Leu Phe Glu Pro Lys Gly Arg Val 1 5 10 15

Leu Leu Val Asp Gly His His Leu Ala Tyr Arg Thr Arg Arg Ala Leu 20 25 30

Lys Gly Leu Thr Thr Ser Arg Gly Glu Pro Val Gln Ala Val Tyr Gly 35 40 45

Phe Ala Lys Ser Leu Leu Lys Ala Leu Lys Glu Asp Gly Tyr Lys Ala 50 . 55 60

Val Phe Val Val Phe Asp Ala Lys Ala Pro Ser Phe Arg His Glu Ala 65 70 75 80

Tyr Glu Ala Tyr Lys Ala Gly Arg Ala Pro Thr Pro Glu Asp Phe Pro 85 90 95

Arg	Gln	Leu	Ala 100	Leu	Ile	Lys	Glu	Leu 105	Val	Asp	Leu	Leu	Gly 110	Phe	Thr
Arg	Leu	Glu 115	Val	Pro	Gly	Tyr	Glu 120	Ala	Asp	Asp	Val	Leu 125	Ala	Thr	Leu
Ala	Lys 130	Lys	Ala	Glu	Lys	Glu 135	Gly	Tyr	Glu	Val	Arg 140	Ile	Leu	Thr	Ala
Asp 145	Arg	Asp	Leu	Tyr	Gln 150	Leu	Val	Ser	Asp	Arg 155	Val	Ala	Val	Leu	His 160
Pro	Glu	Gly	His	Leu 165	Ile	Thr	Pro	Glu	Trp 170	Leu	Trp	Glu	Lys	Tyr 175	Gly
Leu	Arg	Pro	Glu 180	Gln	Trp	Val	Asp	Phe 185	Arg	Ala	Leu	Val	Gly 190	Asp	Pro
Ser	Asp	Asn 195	Leu	Pro	Gly	Val	Lys 200	Gly	Ile	Gly	Glu	Lys 205	Thr	Ala	Leu
Lys	Leu 210	Leu	Lys	Glu	Trp	Gly 215	Ser	Leu	Glu	Asn	Leu 220	Leu	Lys	Asn	Leu
Asp 225	Arg	Val	Lys	Pro	Glu 230	Asn	Val	Arg	Glu	Lys 235	Ile	Lys	Ala	His	Leu 240
Glu	Asp	Leu	Arg	Leu 245	Ser	Leu	Glu	Leu	Ser 250	Arg	Val	Arg	Thr	Asp 255	Leu
Pro	Leu	Glu	Val 260	Asp	Leu	Ala	Gln	Gly 265	Arg	Glu	Pro	Asp	Arg 270	Ġlu	Gly
Leu	Arg	Ala 275	Phe	Leu	Glu	Arg	Leu 280	Glu	Phe	Gly	Ser	Leu 285	Leu	His	Glu
Phe	Gly 290	Leu	Leu	Glu	Ala	Pro 295	Ala	Pro	Leu	Glu	Glu 300	Ala	Pro	Trp	Pro
Pro 305	Pro	Glu	Gly	Ala	Phe 310	Val	Gly	Phe	Val	Leu 315	Ser	Arg	Pro	Glu	Pro 320
Met	Trp	Ala	Glu	Leu 325	Lys	Ala	Leu	Ala	Ala 330	Cys	Arg	Gly	Gly	Arg 335	Val
His	Arg	Ala	Ala 340	Asp	Pro	Leu	Ala	Gly 345	Leu	Lys	Asp	Leu	Lys 350	Glu	Val

Arg	GIY	Leu 355	Leu	Ala	Lys	Asp	Leu 360	Ala	Val	Leu	Ala	365	Arg	Glu	GIĀ
Leu	Asp 370	Leu	Val	Pro	Gly	Asp 375	Asp	Pro	Met	Leu	Leu 380	Ala	Tyr	Leu	Leu
Gly 385	Pro	Ser	Asn	Thr	Thr 390	Pro	Glu	Gly	Val	Ala 395	Arg	Arg	Tyr	Gly	Gly 400
Glu	Trp	Thr	Glu	Asp 405	Ala	Ala	His	Arg	Ala 410	Leu	Leu	Ser	Glu	Arg 415	Leu
His	Arg	Asn	Leu 420	Leu	Lys	Arg	Leu	Glu 425	Gly	Glu	Glu	Lys	Leu 430	Leu	Trp
Leu	Tyr	His 435	Glu	Val	Glu	Lys	Pro 440	Leu	Ser	Arg	Val	Leu 445	Ala	His	Met
Glu	Ala 450	Thr	Gly	Val	Arg	Leu 455	Asp	Val	Ala	Tyr	Leu 460	Gln	Ala	Leu	Ser
Leu 465	Glu	Leu	Ala	Glu	Glu 470	Ile	Arg	Arg	Leu	Glu 475	Glu	Glu	Val	Phe	Arg 480
Leu	Ala	Gly	His	Pro 485	Phe	Asn	Leu	Asn	Ser 490	Arg	Asp	Gln	Leu	Glu 495	Arg
Val	Leu	Phe	Asp 500	Glu	Leu	Arg	Leu	Pro 505	Ala	Leu	Lys	Lys	Thr 510	Lys	Lys
Thr	Gly	Lys 515	Arg	Ser	Thr	Ser	Ala 520	Ala	Val	Leu	Glu	Ala 525	Leu	Arg	Glu
Ala	His 530	Pro	Ile	Val	Glu	Lys 535	Ile	Leu	Gln	His	Arg 540	Glu	Leu	Thr	Lys
Leu 545	Lys	Asn	Thr	Tyr	Val 550	Asp	Pro	Leu	Pro	Ser 555	Leu	Val	His	Pro	Arg 560
Thr	Gly	Arg	Leu	His 565	Thr	Arg	Phe	Asn	Gln 570	Thr	Ala	Thr	Ala	Thr 575	Gly
Arg	Leu	Ser	Ser 580	Ser	Asp	Pro	Asn	Leu 585	Gln	Asn	Ile	Pro	Val 590	Arg	Thr
Pro	Leu	Gly	Gln	Arq	Ile	Arq	Arq	Ala	Phe	Val	Ala	Glu	Ala	Gly	Trp

Ala Leu Val Ala Leu Asp Tyr Ser Gln Ile Glu Leu Arg Val Leu Ala 615 His Leu Ser Gly Asp Glu Asn Leu Ile Arg Val Phe Gln Glu Gly Lys 630 Asp Ile His Thr Gln Thr Ala Ser Trp Met Phe Gly Val Pro Pro Glu Ala Val Asp Pro Leu Met Arg Arg Ala Ala Lys Thr Val Asn Phe Gly Val Leu Tyr Gly Met Ser Ala His Arg Leu Ser Gln Glu Leu Ala Ile Pro Tyr Glu Glu Ala Val Ala Phe Ile Glu Arg Tyr Phe Gln Ser Phe 700 690 695 Pro Lys Val Arg Ala Trp Ile Glu Lys Thr Leu Glu Glu Gly Arg Lys 705 710 720 Arg Gly Tyr Val Glu Thr Leu Phe Gly Arg Arg Tyr Val Pro Asp Leu Asn Ala Arg Val Lys Ser Val Arg Glu Ala Ala Glu Arg Met Ala Phe Asn Met Pro Val Gln Gly Thr Ala Ala Asp Leu Met Lys Leu Ala Met Val Lys Leu Phe Pro Arg Leu Arg Glu Met Gly Ala Arg Met Leu 775 770

Leu Gln Val Ala Asn Glu Leu Leu Leu Glu Ala Pro Gln Ala Arg Ala 785 790 795 800

Glu Glu Val Ala Ala Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro 805 810 815

Leu Ala Val Pro Leu Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu 820 825 830

Ser Ala Lys Gly His His His His His His 835 840

<210> 2850

<211> 2514

<212> DNA

<213> Artificial Sequence

<220>

## <223> Synthetic

<400> 2850 60 atgaattccc tgcccctctt tgagcccaag ggccgggtgc ttctggtgga cggccaccac 120 ctggcctacc gcacccgctt cgccctgaag ggcctcacca ccagccgcgg ggagccggtc caggcggtgt acgggtttgc caagagcctt ttgaaggcgc taagggaaga cggggatgtg 180 240 gtgatcgtgg tgtttgacgc caaggccccc tccttccgcc accagaccta cgaggcctac aaggegggge gggeteecae eeeegaggae ttteecegge agettgeeet tateaaggag 300 atggtggacc ttttgggcct ggagcgcctc gaggtgccgg gctttgaagc ggatgacgtc 360 420 ctggctaccc tggccaagaa ggcggaaaag gaaggctacg aagtgcgcat cctcaccgcg 480 gaccgggacc tttaccagct tctttcggag cgaatctcca tccttcaccc ggagggttac 540 ctgatcaccc cggagtggct ttgggagaag tatgggctta agccttccca gtgggtggac 600 taccgggcct tggccgggga cccttccgac aacatccccg gcgtgaaggg catcggggag 660 aagacggcgg ccaagctgat ccgggagtgg ggaagcctgg aaaaccttct taagcacctg 720 gaacaggtga aacctgcctc cgtgcgggag aagatcctta gccacatgga ggacctcaag 780 ctatccctgg agctatcccg ggtgcacacg gacttgctcc ttcaggtgga cttcgcccgg 840 cgccgggagc cggaccggga ggggcttaag gcctttttgg agaggctgga gttcggaagc 900 ctcctccacg agttcggcct gttggaaagc ccggtggcgg cggaggaagc tccctggccg cccccgagg gagccttcgt ggggtacgtt ctttcccgcc ccgagcccat gtgggcggag 960 ettaacgeet tggeegeege etggggegge egegtgeace gggeageaga eccettggeg 1020 gggctaaagg acctcaagga ggtccggggc ctcctcgcca aggacctcgc cgtcttggcc 1080 tegagggagg ggetagaeet egtgeeeggg gaegaeeeea tgeteetege etaceteetg 1140 ggcccctcca acaccaccc cgagggggtg gcgcggcgct acggggggga gtggacggag 1200 gacgccgccc accgggccct cctctcggag aggctccatc ggaacctcct taagcgcctc 1260 1320 gagggggagg agaagctcct ttggctctac cacgaggtgg aaaagcccct ctcccgggtc ctggcccaca tggaggccac cggggtacgg ctggacgtgg cctaccttca ggccctttcc 1380 ctggagcttg cggaggagat ccgccgcctc gaggaggagg tcttccgctt ggcgggccac 1440

1500 cccttcaacc tcaactcccg ggaccagctg gaaagggtgc tctttgacga gcttaggctt 1560 cccgccttga agaagacgaa gaagacaggc aagcgctcca ccagcgccgc ggtgctggag gccctacggg aggcccaccc catcgtggag aagatcctcc agcaccggga gctcaccaag 1620 1680 ctcaagaaca cctacgtgga cccctccca agcctcgtcc acccgaggac gggccgcctc 1740 cacacceget teaaccagae ggeeaeggee aeggggagge ttagtagete egaceeeaae ctgcagaaca tccccgtccg caccccttg ggccagagga tccgccgggc cttcgtggcc 1800 1860 gaggegggtt gggegttggt ggeeetggae tatageeaga tagageteeg egteetegee 1920 cacctctccg gggacgaaaa cctgatcagg gtcttccagg aggggaagga catccacacc 1980 cagaccgcaa gctggatgtt cggcgtcccc ccggaggccg tggaccccct gatgcgccgg 2040 geggecaaga eggtgaactt eggegteete taeggeatgt eegeceatag geteteeeag 2100 gagettgeca teceetaega ggaggeggtg geetttatag agegetaett ecaaagette 2160 cccaaggtgc gggcctggat agaaaagacc ctggaggagg ggaggaagcg gggctacgtg gaaaccctct tcggaagaag gcgctacgtg cccgacctca acgcccgggt gaagagcgtc 2220 agggaggccg cggagcgcat ggccttcaac atgcccgtcc agggcaccgc cgccgacctc 2280 2340 atgaageteg ceatggtgaa getetteece egeeteeggg agatggggge eegeatgete 2400 ctccaggtcg ccaacgagct cctcctggag gccccccaag cgcgggccga ggaggtggcg gctttggcca aggaggccat ggagaaggcc tatcccctcg ccgtgcccct ggaggtggag 2460 2514 gtggggatgg gggaggactg gctttccgcc aagggtcacc accaccacca ccac

<210> 2851

<211> 838

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2851

Met Asn Ser Leu Pro Leu Phe Glu Pro Lys Gly Arg Val Leu Leu Val 1 5 10 15

Asp Gly His His Leu Ala Tyr Arg Thr Arg Phe Ala Leu Lys Gly Leu 20 25 30

Thr Thr Ser Arq Gly Glu Pro Val Gln Ala Val Tyr Gly Phe Ala Lys

55

Ser Leu Leu Lys Ala Leu Arg Glu Asp Gly Asp Val Val Ile Val Val

35

Phe 65	Asp	Ala	Lys	Ala	Pro 70	Ser	Phe	Arg	His	Gln 75	Thr	Tyr	Glu	Ala	Tyr 80
Lys	Ala	Gly	Arg	Ala 85	Pro	Thr	Pro	Glu	Asp 90	Phe	Pro	Arg	Gln	Leu 95	Ala
Leu	Ile	Lys	Glu 100	Met	Val	Asp	Leu	Leu 105	Gly	Leu	Glu	Arg	Leu 110	Glu	Val
Pro	Gly	Phe 115	Glu	Ala	Asp	Asp	Val 120	Leu	Ala	Thr	Leu	Ala 125	Lys	Lys	Ala
Glu	Lys 130	Glu	Gly	Tyr	Glu	Val 135	Arg	Ile	Leu	Thr	Ala 140	Asp	Arg	Asp	Leu
Tyr 145	Gln	Leu	Leu	Ser	Glu 150	Arg	Ile	Ser	Ile	Leu 155	His	Pro	Glu	Gly	Tyr 160
Leu	Ile	Thr	Pro	Glu 165	Trp	Leu	Trp	Glu	Lys 170	Tyr	Gly	Leu	Lys	Pro 175	Ser
Gln	Trp	Val	Asp 180	Tyr	Arg	Ala	Leu	Ala 185	Gly	Asp	Pro	Ser	Asp 190	Asn	Ile
Pro	Gly	Val 195	Lys	Gly	Ile	Gly	Glu 200	Lys	Thr	Ala	Ala	Lys 205	Leu	Ile	Arg
Glu	Trp 210	Gly	Ser	Leu	Glu	Asn 215	Leu	Leu	Lys	His	Leu 220	Glu	Gln	Val	Lys
Pro 225	Ala	Ser	Val	Arg	Glu 230	Lys	Ile	Leu	Ser	His 235	Met	Glu	Asp	Leu	Lys 240

Leu Glu Arg Leu Glu Phe Gly Ser Leu Leu His Glu Phe Gly Leu Leu 275 280 285

Leu Ser Leu Glu Leu Ser Arg Val His Thr Asp Leu Leu Gln Val

Asp Phe Ala Arg Arg Glu Pro Asp Arg Glu Gly Leu Lys Ala Phe

250

Glu	Ser 290	Pro	Val	Ala	Ala	G1u 295	Glu	Ala	Pro	Trp	300	Pro	Pro	GIU	GIY
Ala 305	Phe	Val	Gly	Tyr	Val 310	Leu	Ser	Arg	Pro	Glu 315	Pro	Met	Trp	Ala	Glu 320
Leu	Asn	Ala	Leu	Ala 325	Ala	Ala	Trp	Gly	Gly 330	Arg	Val	His	Arg	Ala 335	Ala
Asp	Pro	Leu	Ala 340	Gly	Leu	Lys	Asp	Leu 345	Lys	Glu	Val	Arg	Gly 350	Leu	Leu
Ala	Lys	Asp 355	Leu	Ala	Val	Leu	Ala 360	Ser	Arg	Glu	Gly	Leu 365	Asp	Leu	Val
Pro	Gly 370	Asp	Asp	Pro	Met	Leu 375	Leu	Ala	Tyr	Leu	Leu 380	Gly	Pro	Ser	Asn
Thr 385	Thr	Pro	Glu	Gly	Val 390	Ala	Arg	Arg	Tyr	Gly 395	Gly	Glu	Trp	Thr	Glu 400
Asp	Ala	Ala	His	Arg 405	Ala	Leu	Leu	Ser	Glu 410	Arg	Leu	His	Arg	Asn 415	Leu
Leu	Lys	Arg	Leu 420	Glu	Gly	Glu	Glu	Lys 425	Leu	Leu	Trp	Leu	Tyr 430	His	Glu
Val	Glu	Lys 435	Pro	Leu	Ser	Arg	Val 440	Leu	Ala	His	Met	Glu 445	Ala	Thr	Gly
Val	Arg 450	Leu	Asp	Val	Ala	Tyr 455	Leu	Gln	Ala	Leu	Ser 460	Leu	Glu	Leu	Ala
Glu 465	Glu	Ile	Arg	Arg	Leu 470	Glu	Glu	Glu	Val	Phe 475	Arg	Leu	Ala	Gly	His 480
Pro	Phe	Asn	Leu	Asn 485	Ser	Arg	Asp	Gln	Leu 490	Glu	Arg	Val	Leu	Phe 495	Asp
Glu	Leu	Arg	Leu 500	Pro	Ala	Leu	Lys	Lys 505	Thr	Lys	Lys	Thr	Gly 510	Lys	Arg
Ser	Thr	Ser 515	Ala	Ala	Val	Leu	Glu 520	Ala	Leu	Arg	Glu	Ala 525	His	Pro	Ile
Val	Glu 530	Lys	Ile	Leu	Gln	His 535	Arg	Glu	Leu	Thr	Lys 540	Leu	Lys	Asn	Thr

545	vai	Asp	PIO	ьeu	550	ser	ьеu	vai	nis	555	Arg	1111	GIY	Arg	560
His	Thr	Arg	Phe	Asn 565	Gln	Thr	Ala	Thr	Ala 570	Thr	Gly	Arg	Leu	Ser 575	Ser
Ser	Asp	Pro	Asn 580	Leu	Gln	Asn	Ile	Pro 585	Val	Arg	Thr	Pro	Leu 590	Gly	Gln
Arg	Ile	Arg 595	Arg	Ala	Phe	Val	Ala 600	Glu	Ala	Gly	Trp	Ala 605	Leu	Val	Ala
Leu	Asp 610	Tyr	Ser	Gln	Ile	Glu 615	Leu	Arg	Val	Leu	Ala 620	His	Leu	Ser	Gly
Asp 625	Glu	Asn	Leu	Ile	Arg 630	Val	Phe	Gln	Glu	Gly 635	Lys	Asp	Ile	His	Thr 640
Gln	Thr	Ala	Ser	Trp 645	Met	Phe	Gly	Val	Pro 650	Pro	Glu	Ala	Val	Asp 655	Pro
Leu	Met	Arg	Arg 660	Ala	Ala	Lys	Thr	Val 665	Asn	Phe	Gly	Val	Leu 670	Tyr	Gly
Met	Ser	Ala 675	His	Arg	Leu	Ser	Gln 680	Glu	Leu	Ala	Ile	Pro 685	Tyr	Glu	Glu
Ala	Val 690	Ala	Phe	Ile	Glu	Arg 695	Tyr	Phe	Gln	Ser	Phe 700	Pro	Lys	Val	Arg
Ala 705	Trp	Ile	Glu	Lys	Thr 710	Leu	Glu	Glu	Gly	Arg 715	Lys	Arg	Gly	Tyr	Val 720
Glu	Thr	Leu	Phe	Gly 725	Arg	Arg	Arg	Tyr	Val 730	Pro	Asp	Leu	Asn	Ala 735	Arg
Val	Lys	Ser	Val 740	Arg	Glu	Ala	Ala	Glu 745	Arg	Met	Ala	Phe	Asn 750	Met	Pro
Val	Gln	Gly 755	Thr	Ala	Ala	Asp	Leu 760	Met	Lys	Leu	Ala	Met 765	Val	Lys	Leu
Phe	Pro 770	Arg	Leu	Arg	Glu	Met 775	Gly	Ala	Arg	Met	Leu 780	Leu	Gln	Val	Ala
Asn	Glu	Leu	Leu	Leu	Glu	Ala	Pro	Gln	Ala	Ara	Ala	Glu	Glu	Val	Ala

785 790 795 800

Ala Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro Leu Ala Val Pro 805 810 815

Leu Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu Ser Ala Lys Gly
820 825 830

His His His His His 835

<210> 2852

<211> 2514

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2852

60 atgaattccc tgcccctctt tgagcccaag ggccgggtgc ttctggtgga cggccaccac ctggcctacc gcacccgcca cgccctgaag ggcctcacca ccagccgcgg ggagccggtc 120 180 caggcggtgt acgggtttgc caagagcctt ttgaaggcgc taagggaaga cggggatgtg gtgatcgtgg tgtttgacgc caaggccccc tccttccgcc accagaccta cgaggcctac 240 aaggegggge gggeteceae eeeegaggae ttteeeegge agettgeeet tateaaggag 300 atggtggacc ttttgggcct ggagcgcctc gaggtgccgg gctttgaagc ggatgacgtc 360 420 ctggctaccc tggccaagaa ggcggaaaag gaaggctacg aagtgcgcat cctcaccgcg 480 gaccgggacc tttaccagct tctttcggag cgaatctcca tccttcaccc ggagggttac 540 ctgatcaccc cggagtggct ttgggagaag tatgggctta agccttccca gtgggtggac taccgggcct tggccgggga cccttccgac aacatccccg gcgtgaaggg catcggggag 600 aagacggcgg ccaagctgat ccgggagtgg ggaagcctgg aaaaccttct taagcacctg 660 720 gaacaggtga aacctgcctc cgtgcgggag aagatcctta gccacatgga ggacctcaag 780 ctatccctgg agctatcccg ggtgcacacg gacttgctcc ttcaggtgga cttcgcccgg cgccgggagc cggaccggga ggggcttaag gcctttttgg agaggctgga gttcggaagc 840 900 ctcctccacg agttcggcct gttggaaagc ccggtggcgg cggaggaagc tccctggccg ccccccgagg gagcettegt ggggtacgtt ctttcccgcc ccgagcccat gtgggcggag 960

cttaacgcct tggccgccgc ctggggcggc cgcgtgcacc gggcagcaga ccccttggcg 1020 1080 gggctaaagg acctcaagga ggtccggggc ctcctcgcca aggacctcgc cgtcttggcc tegagggagg ggetagaeet egtgeeeggg gaegaeeeea tgeteetege etaeeteetg 1140 ggcccctcca acaccacccc cgagggggtg gcgcggcgct acggggggga gtggacggag 1200 gacgccgccc accgggccct cctctcggag aggctccatc ggaacctcct taagcgcctc 1260 1320 gagggggagg agaagctcct ttggctctac cacgaggtgg aaaagcccct ctcccgggtc 1380 ctggcccaca tggaggccac cggggtacgg ctggacgtgg cctaccttca ggccctttcc ctggagcttg cggaggagat ccgccgcctc gaggaggagg tcttccgctt ggcgggccac 1440 1500 cccttcaacc tcaactcccg ggaccagctg gaaagggtgc tctttgacga gcttaggctt cccgccttga agaagacgaa gaagacaggc aagcgctcca ccagcgccgc ggtgctggag 1560 1620 gccctacggg aggcccaccc catcgtggag aagatcctcc agcaccggga gctcaccaag 1680 ctcaagaaca cctacgtgga cccctccca agcctcgtcc acccgaggac gggccgcctc 1740 cacacccgct tcaaccagac ggccacggcc acggggaggc ttagtagctc cgaccccaac 1800 ctgcagaaca tccccgtccg caccccttg ggccagagga tccgccgggc cttcgtggcc 1860 gaggegggtt gggegttggt ggeeetggae tatageeaga tagageteeg egteetegee 1920 cacctctccg gggacgaaaa cctgatcagg gtcttccagg aggggaagga catccacacc cagaccgcaa gctggatgtt cggcgtcccc ccggaggccg tggaccccct gatgcgccgg 1980 2040 geggeeaaga eggtgaactt eggegteete taeggeatgt eegeeeatag geteteeeag 2100 gagettgeca teceetaega ggaggeggtg geetttatag agegetaett ceaaagette cccaaggtgc gggcctggat agaaaagacc ctggaggagg ggaggaagcg gggctacgtg 2160 gaaaccctct tcggaagaag gcgctacgtg cccgacctca acgcccgggt gaagagcgtc 2220 2280 agggaggccg cggagcgcat ggccttcaac atgcccgtcc agggcaccgc cgccgacctc atgaageteg ceatggtgaa getetteece egeeteeggg agatggggge eegeatgete 2340 2400 ctccaggtcg ccaacgagct cctcctggag gccccccaag cgcgggccga ggaggtggcg 2460 getttggcca aggaggccat ggagaaggcc tatcccctcg ccgtgcccct ggaggtggag gtggggatgg gggaggactg gctttccgcc aagggtcacc accaccacca ccac 2514

<210> 2853

<211> 838

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2853

Met Asn Ser Leu Pro Leu Phe Glu Pro Lys Gly Arg Val Leu Leu Val 1 5 10 15

Asp Gly His His Leu Ala Tyr Arg Thr Arg His Ala Leu Lys Gly Leu 20 25 30

Thr Thr Ser Arg Gly Glu Pro Val Gln Ala Val Tyr Gly Phe Ala Lys
35 40 45

Ser Leu Leu Lys Ala Leu Arg Glu Asp Gly Asp Val Val Ile Val Val 50 55 60

Phe Asp Ala Lys Ala Pro Ser Phe Arg His Gln Thr Tyr Glu Ala Tyr 65 70 75 80

Lys Ala Gly Arg Ala Pro Thr Pro Glu Asp Phe Pro Arg Gln Leu Ala 85 90 95

Leu Ile Lys Glu Met Val Asp Leu Leu Gly Leu Glu Arg Leu Glu Val
100 105 110

Pro Gly Phe Glu Ala Asp Asp Val Leu Ala Thr Leu Ala Lys Lys Ala 115 120 125

Glu Lys Glu Gly Tyr Glu Val Arg Ile Leu Thr Ala Asp Arg Asp Leu 130 140

Tyr Gln Leu Leu Ser Glu Arg Ile Ser Ile Leu His Pro Glu Gly Tyr 145 150 155 160

Leu Ile Thr Pro Glu Trp Leu Trp Glu Lys Tyr Gly Leu Lys Pro Ser 165 170 175

Gln Trp Val Asp Tyr Arg Ala Leu Ala Gly Asp Pro Ser Asp Asn Ile 180 185 190

Pro Gly Val Lys Gly Ile Gly Glu Lys Thr Ala Ala Lys Leu Ile Arg 195 200 205

Glu Trp Gly Ser Leu Glu Asn Leu Leu Lys His Leu Glu Gln Val Lys 210 215 220

Pro 225	Ala	Ser	Val	Arg	Glu 230	Lys	He	Leu	ser	H1S 235	Met	GIU	Asp	Leu	140
Leu	Ser	Leu	Glu	Leu 245	Ser	Arg	Val	His	Thr 250	Asp	Leu	Leu	Leu	Gln 255	Val
Asp	Phe	Ala	Arg 260	Arg	Arg	Glu	Pro	Asp 265	Arg	Glu	Gly	Leu	Lys 270	Ala	Phe
Leu	Glu	Arg 275	Leu	Glu	Phe	Gly	Ser 280	Leu	Leu	His	Glu	Phe 285	Gly	Leu	Leu
Glu	Ser 290	Pro	Val	Ala	Ala	Glu 295	Glu	Ala	Pro	Trp	Pro 300	Pro	Pro	Glu	Gly
Ala 305	Phe	Val	Gly	Tyr	Val 310	Leu	Ser	Arg	Pro	Glu 315	Pro	Met	Trp	Ala	Glu 320
Leu	Asn-	Ala	Leu	Ala 325	Ala	Ala	Trp	Gly	Gly 330	Arg	Val	His	Arg	Ala 335	Ala
Asp	Pro	Leu	Ala 340	Gly	Leu	Lys	Asp	Leu 345	Lys	Glu	Val	Arg	Gly 350	Leu	Leu
Ala	Lys	Asp 355	Leu	Ala	Val	Leu	Ala 360	Ser	Arg	Glu	Gly	Leu 365	Asp	Leu	Val
Pro	Gly 370	Asp	Asp	Pro	Met	Leu 375	Leu	Ala	Tyr	Leu	Leu 380	Gly	Pro	Ser	Asn
Thr 385	Thr	Pro	Glu	Gly	Val 390	Ala	Arg	Arg	Tyr	Gly 395	Gly	Glu	Trp	Thr	Glu 400
Asp	Ala	Ala	His	Arg 405	Ala	Leu	Leu	Ser	Glu 410	Arg	Leu	His	Arg	Asn 415	Leu
Leu	Lys	Arg	Leu 420	Glu	Gly	Glu	Glu	Lys 425	Leu	Leu	Trp	Leu	Tyr 430	His	Glu
Val	Glu	Lys 435	Pro	Leu	Ser	Arg	Val 440	Leu	Ala	His	Met	Glu 445	Ala	Thr	Gly
Val	Arg 450	Leu	Asp	Val	Ala	Tyr 455	Leu	Gln	Ala	Leu	Ser 460	Leu	Glu	Leu	Ala
Glu 465	Glu	Ile	Arg	Arg	Leu 470	Glu	Glu	Glu	Val	Phe 475	Arg	Leu	Ala	Gly	His 480

Pro	Pne	Asn	ьeu	485	ser	Arg	Asp	GIII	490	GIU	Arg	Val	Leu	495	Asp
Glu	Leu	Arg	Leu 500	Pro	Ala	Leu	Lys	Lys 505	Thr	Lys	Lys	Thr	Gly 510	Lys	Arg
Ser	Thr	Ser 515	Ala	Ala	Val	Leu	Glu 520	Ala	Leu	Arg	Glu	Ala 525	His	Pro	Ile
Val	Glu 530	Lys	Ile	Leu	Gln	His 535	Arg	Glu	Leu	Thr	Lys 540	Leu	Lys	Asn	Thr
Tyr 545	Val	Asp	Pro	Leu	Pro 550	Ser	Leu	Val	His	Pro 555	Arg	Thr	Gly	Arg	Leu 560
His	Thr	Arg	Phe	Asn 565	Gln	Thr	Ala	Thr	Ala 570	Thr	Gly	Arg	Leu	Ser 575	Ser
Ser	Asp	Pro	Asn 580	Leu	Gln	Asn	Ile	Pro 585		Arg	Thr	Pro	Leu 590	Gly	Gln
Arg	Ile	Arg 595	Arg	Ala	Phe	Val	Ala 600	Glu	Ala	Gly	Trp	Ala 605	Leu	Val	Ala
Leu	Asp 610	Tyr	Ser	Gln	Ile	Glu 615	Leu	Arg	Val	Leu	Ala 620	His	Leu	Ser	Gly
Asp 625	Glu	Asn	Leu	Ile	Arg 630	Val	Phe	Gln	Glu	Gly 635	Lys	Asp	Ile	His	Thr 640
Gln	Thr	Ala	Ser	Trp 645	Met	Phe	Gly	Val	Pro 650	Pro	Glu	Ala	Val	Asp 655	Pro
Leu	Met	Arg	Arg 660	Ala	Ala	Lys	Thr	Val 665	Asn	Phe	Gly	Val	Leu 670	Tyr	Gly
Met	Ser	Ala 675	His	Arg	Leu	Ser	Gln 680	Glu	Leu	Ala	Ile	Pro 685	Tyr	Glu	Glu
Ala	Val 690	Ala	Phe	Ile	Glu	Arg 695	Tyr	Phe	Gln	Ser	Phe 700	Pro	Lys	Val	Arg
Ala 705	Trp	Ile	Glu	Lys	Thr 710	Leu	Glu	Glu	Gly	Arg 715	Lys	Arg	Gly	Tyr	Val 720
Glu	Thr	Leu	Phe	Gly	Arg	Arg	Arg	Tyr	Val	Pro	Asp	Leu	Asn	Ala	Arg

725	730	735
143	130	, , ,

Val Lys Ser Val Arg Glu Ala Ala Glu Arg Met Ala Phe Asn Met Pro
740 745 750

Val Gln Gly Thr Ala Ala Asp Leu Met Lys Leu Ala Met Val Lys Leu 755 760 765

Phe Pro Arg Leu Arg Glu Met Gly Ala Arg Met Leu Leu Gln Val Ala 770 780

Asn Glu Leu Leu Glu Ala Pro Gln Ala Arg Ala Glu Glu Val Ala 785 790 795 800

Ala Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro Leu Ala Val Pro 805 810 815

Leu Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu Ser Ala Lys Gly 820 825 830

His His His His His 835

<210> 2854

<211> 2514

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2854

60 atqaattccc tgcccctctt tgagcccaag ggccgggtgc ttctggtgga cggccaccac 120 ctggcctacc gcacccgccg cgccctgaag ggcctcacca ccagccgcgg ggagccggtc caggcggtgt acgggtttgc caagagcctt ttgaaggcgc taagggaaga cggggatgtg 180 240 gtgatcgtgg tgtttgacgc caaggccccc tccttccgcc accagaccta cgaggcctac 300 aaggegggge gggeteecac eeeegaggae ttteecegge agettgeeet tateaaggag 360 atggtggacc ttttgggcct ggagcgcctc gaggtgccgg gctttgaagc ggatgacgtc 420 ctggctaccc tggccaagaa ggcggaaaag gaaggctacg aagtgcgcat cctcaccgcg 480 gaccgggacc tttaccagct tctttcggag cgaatctcca tccttcaccc ggagggttac

540 ctgatcaccc cggagtggct ttgggagaag tatgggctta agccttccca gtgggtggac 600 taccgggcct tggccgggga cccttccgac aacatccccg gcgtgaaggg catcggggag aagacggcgg ccaagctgat ccgggagtgg ggaagcctgg aaaaccttct taagcacctg 660 720 gaacaggtga aacctgcctc cgtgcgggag aagatcctta gccacatgga ggacctcaag 780 ctatccctgg agctatcccg ggtgcacacg gacttgctcc ttcaggtgga cttcgcccgg cgccgggagc cggaccggga ggggcttaag gcctttttgg agaggctgga gttcggaagc 840 900 ctcctccacg agttcggcct gttggaaagc ccggtggcgg cggaggaagc tccctggccg 960 cccccgagg gagccttcgt ggggtacgtt ctttcccgcc ccgagcccat gtgggcggag cttaacgcct tggccgccgc ctggggcggc cgcgtgcacc gggcagcaga ccccttggcg 1020 gggctaaagg acctcaagga ggtccggggc ctcctcgcca aggacctcgc cgtcttggcc 1080 tcgagggagg ggctagacct cgtgcccggg gacgacccca tgctcctcgc ctacctcctg 1140 ggcccctcca acaccaccc cgagggggtg gcgcggcgct acggggggga gtggacggag 1200 1260 gacgccgccc accgggccct cctctcggag aggctccatc ggaacctcct taagcgcctc gagggggagg agaageteet ttggetetae caegaggtgg aaaageeeet eteeegggte 1320 ctggcccaca tggaggccac cggggtacgg ctggacgtgg cctaccttca ggccctttcc 1380 1440 ctggagcttg cggaggagat ccgccgcctc gaggaggagg tcttccgctt ggcgggccac 1500 cccttcaacc tcaactcccg ggaccagctg gaaagggtgc tctttgacga gcttaggctt 1560 cccgccttga agaagacgaa gaagacaggc aagcgctcca ccagcgccgc ggtgctggag gccctacggg aggcccaccc catcgtggag aagatcctcc agcaccggga gctcaccaag 1620 1680 ctcaagaaca cctacgtgga cccctccca agcctcgtcc acccgaggac gggccgcctc 1740 cacacceget teaaccagae ggccaeggce aeggggagge ttagtagete egaceceaae ctgcagaaca tccccgtccg caccccttg ggccagagga tccgccgggc cttcgtggcc 1800 1860 gaggegggtt gggegttggt ggeeetggae tatageeaga tagageteeg egteetegee 1920 cacctctccg gggacgaaaa cctgatcagg gtcttccagg aggggaagga catccacacc cagaccgcaa gctggatgtt cggcgtcccc ccggaggccg tggaccccct gatgcgccgg 1980 2040 geggecaaga eggtgaactt eggegteete taeggeatgt eegeecatag geteteecag gagettgeca teceetaega ggaggeggtg geetttatag agegetaett ecaaagette 2100 2160 cccaaggtgc gggcctggat agaaaagacc ctggaggagg ggaggaagcg gggctacgtg 2220 gaaaccetet teggaagaag gegetaegtg ceegacetea aegeeegggt gaagagegte 2280 agggaggeeg eggagegeat ggeetteaac atgecegtee agggeacege egeegaeete 2340

atgaageteg ceatggtgaa getetteece egeeteeggg agatggggge eegeatgete

ctc	caggt	tcg (	ccaa	cgago	ct co	ctcct	ggag	ggc	cccc	caag	cgc	gggc	cga (	ggagg	gtggcg	2400
gctt	tgg	cca a	aggag	ggcca	at go	gagaa	aggco	tat	cccc	ctcg	ccgt	gcc	cct (	ggagg	gtggag	2460
gtgg	ggat	tgg g	gggag	ggact	g go	ctttc	ccgc	aag	gggto	cacc	acca	accad	cca	ccac		2514
<210> 2855																
<211> 838																
<212> PRT																
<213> Artificial Sequence																
/213/ VICILICIAL Seducator																
<220>																
<223	3 > 5	Syntl	netio	c												
<400	)> 2	2855														
Met 1	Asn	Ser	Leu	Pro 5	Leu	Phe	Glu	Pro	Lys 10	Gly	Arg	Val	Leu	Leu 15	Val	
Asp	Gly	His	His 20	Leu	Ala	Tyr	Arg	Thr 25	Arg	Arg	Ala	Leu	Lys 30	Gly	Leu	
Thr	Thr	Ser 35	Arg	Gly	Glu	Pro	Val 40	Gln	Ala	Val	Tyr	Gly 45	Phe	Ala	Lys	
Ser	Leu 50	Leu	Lys	Ala	Leu	Arg 55	Glu	Asp	Gly	Asp	Val 60	Val	Ile	Val	Val	
Phe 65	Asp	Ala	Lys	Ala	Pro 70	Ser	Phe	Arg	His	Gln 75	Thr	Tyr	Glu	Ala	Tyr 80	
Lys	Ala	Gly	-	Ala 85	Pro	Thr	Pro		Asp 90	Phe	Pro	Arg	Gln	Leu 95	Ala	
Leu	Ile	Lys	Glu 100	Met	Val	Asp	Leu	Leu 105	Gly	Leu	Glu	Arg	Leu 110	Glu	Val	
Pro	Gly	Phe 115	Glu	Ala	Asp	Asp	Val 120	Leu	Ala	Thr	Leu	Ala 125	Lys	Lys	Ala	
Glu	Lys 130	Glu	Gly	Tyr	Glu	Val 135	Arg	Ile	Leu	Thr	Ala 140	Asp	Arg	Asp	Leu	
Tyr 145	Gln	Leu	Leu	Ser	Glu 150	Arg	Ile	Ser	Ile	Leu 155	His	Pro	Glu	Gly	Tyr 160	

Leu	Ile	Thr	Pro	Glu 165	Trp	Leu	Trp	Glu	Lys 170	Tyr	Gly	Leu	Lys	Pro 175	Ser
Gln	Trp	Val	Asp 180	Tyr	Arg	Ala	Leu	Ala 185	Gly	Asp	Pro	Ser	Asp 190	Asn	Ile
Pro	Gly	Val 195	Lys	Gly	Ile	Gly	Glu 200	Lys	Thr	Ala	Ala	Lys 205	Leu	Ile	Arg
Glu	Trp 210	Gly	Ser	Leu	Glu	Asn 215	Leu	Leu	Lys	His	Leu 220	Glu	Gln	Val	Lys
Pro 225	Ala	Ser	Val	Arg	Glu 230	Lys	Ile	Leu	Ser	His 235	Met	Glu	Asp	Leu	Lys 240
Leu	Ser	Leu	Glu	Leu 245	Ser	Arg	Val	His	Thr 250	Asp	Leu	Leu	Leu	Gln 255	Val
Asp	Phe	Ala	Arg 260	Arg	Arg	Glu	Pro	Asp 265	Arg	Glu	Gly	Leu	Lys 270	Ala	Phe
Leu	Glu	Arg 275	Leu	Glu	Phe	Gly	Ser 280	Leu	Leu	His	Glu	Phe 285	Gly	Leu	Leu
Glu	Ser 290	Pro	Val	Ala	Ala	Glu 295	Glu	Ala	Pro	Trp	Pro 300	Pro	Pro	Glu	Gly
Ala 305	Phe	Val	Gly	Tyr	Val 310	Leu	Ser	Arg	Pro	Glu 315	Pro	Met	Trp	Ala	Glu 320
Leu	Asn	Ala	Leu	Ala 325	Ala	Ala	Trp	Gly	Gly 330	Arg	Val	His	Arg	Ala 335	Ala
Asp	Pro	Leu	Ala 340	Gly	Leu	Lys	Asp	Leu 345	Lys	Glu	Val	Arg	Gly 350	Leu	Leu
Ala	Lys	Asp 355	Leu	Ala	Val	Leu	Ala 360	Ser	Arg	Glu	Gly	Leu 365	Asp	Leu	Val
Pro	Gly 370	Asp	Asp	Pro	Met	Leu 375	Leu	Ala	Tyr	Leu	Leu 380	Gly	Pro	Ser	Asn
Thr 385	Thr	Pro	Glu	Gly	Val 390	Ala	Arg	Arg	Tyr	Gly 395	Gly	Glu	Trp	Thr	Glu 400
Asp	Ala	Ala	His	Arg 405	Ala	Leu	Leu	Ser	Glu 410	Arg	Leu	His	Arg	Asn 415	Leu

Leu	ГÀЗ	Arg	Leu 420	Glu	GIY	GIU	Glu	Lys 425	Leu	ьeu	Trp	ьeu	430	HIS	GIU
Val	Glu	Lys 435	Pro	Leu	Ser	Arg	Val 440	Leu	Ala	His	Met	Glu 445	Ala	Thr	Gly
Val	Arg 450	Leu	Asp	Val	Ala	Tyr 455	Leu	Gln	Ala	Leu	Ser 460	Leu	Glu	Leu	Ala
Glu 465	Glu	Ile	Arg	Arg	Leu 470	Glu	Glu	Glu	Val	Phe 475	Arg	Leu	Ala	Gly	His 480
Pro	Phe	Asn	Leu	Asn 485	Ser	Arg	Asp	Gln	Leu 490	Glu	Arg	Val	Leu	Phe 495	Asp
Glu	Leu	Arg	Leu 500	Pro	Ala	Leu	Lys	Lys 505	Thr	Lys	Lys	Thr	Gly 510	Lys	Arg
Ser	Thr	Ser 515	Ala	Ala	Val	Leu	Glu 520	Ala	Leu	Arg	Glu	Ala 525	His	Pro	Ile
Val	Glu 530	Lys	Ile	Leu	Gln	His 535	Arg	Glu	Leu	Thr	Lys 540	Leu	Lys	Asn	Thr
Tyr 545	Val	Asp	Pro	Leu	Pro 550	Ser	Leu	Val	His	Pro 555	Arg	Thr	Gly	Arg	Leu 560
His	Thr	Arg	Phe	Asn 565	Gln	Thr	Ala	Thr	Ala 570	Thr	Gly	Arg	Leu	Ser 575	Ser
Ser	Asp	Pro	Asn 580	Leu	Gln	Asn	Ile	Pro 585	Val	Arg	Thr	Pro	Leu 590	Gly	Gln
Arg	Ile	Arg 595	Arg	Ala	Phe	Val	Ala 600	Glu	Ala	Gly	Trp	Ala 605	Leu	Val	Ala
Leu	Asp 610	Tyr	Ser	Gln	Ile	Glu 615	Leu	Arg	Val	Leu	Ala 620	His	Leu	Ser	Gly
Asp 625	Glu	Asn	Leu	Ile	Arg 630	Val	Phe	Gln	Glu	Gly 635	Lys	Asp	Ile	His	Thr 640
Gln	Thr	Ala	Ser	Trp 645	Met	Phe	Gly	Val	Pro 650	Pro	Glu	Ala	Val	Asp 655	Pro
Leu	Met	Arg	Arg	Ala	Ala	Lys	Thr	Val	Asn	Phe	Gly	Val	Leu	Tyr	Gly

660 665 670

Met Ser Ala His Arg Leu Ser Gln Glu Leu Ala Ile Pro Tyr Glu Glu 675 680 685

Ala Val Ala Phe Ile Glu Arg Tyr Phe Gln Ser Phe Pro Lys Val Arg 690 695 700

Ala Trp Ile Glu Lys Thr Leu Glu Glu Gly Arg Lys Arg Gly Tyr Val 705 710 715 720

Glu Thr Leu Phe Gly Arg Arg Arg Tyr Val Pro Asp Leu Asn Ala Arg
725 730 735

Val Lys Ser Val Arg Glu Ala Ala Glu Arg Met Ala Phe Asn Met Pro 740 745 750

Val Gln Gly Thr Ala Ala Asp Leu Met Lys Leu Ala Met Val Lys Leu 755 760 765

Phe Pro Arg Leu Arg Glu Met Gly Ala Arg Met Leu Leu Gln Val Ala 770 780

Asn Glu Leu Leu Glu Ala Pro Gln Ala Arg Ala Glu Glu Val Ala 785 790 795 800

Ala Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro Leu Ala Val Pro 805 810 815

Leu Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu Ser Ala Lys Gly 820 825 830

His His His His His 835

<210> 2856

<211> 2517

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2856

atgaattegg ggatgetgee cetetttgag cecaagggee gggteeteet ggtggaegge 120 caccacctgg cctaccgcac ccgccacgcc ctgaagggcc tcaccaccag ccggggggag ccggtgcagg cggtctacgg cttcgccaag agcctcctca aggccctcaa ggaggacggg 180 240 gacgeggtga tegtggtett tgacgecaag geceettet teegecacga ggeetaeggg 300 gggtacaagg cgggccgggc ccccacgccg gaggactttc cccggcaact cgccctcatc 360 aaggagetgg tggaceteet ggggetggeg egeetegagg teeegggeta egaggeggae 420 gacgtcctgq ccagcctqqc caagaaggcg gaaaaggagg gctacgaggt ccgcatcctc 480 accgccgaca aagaccttta ccagctcctt tccgaccgca tccacgtcct ccaccccgag 540 gggtacetea teaceegge etggetttgg gaaaagtacg geetgaggee egaceagtgg 600 geogactace gggeeetgae eggggaegag teegaeaace tteeeggggt caagggeate 660 ggggagaaga cggcgaggaa gcttctggag gagtggggga gcctggaagc cctcctcaag 720 aacctggacc ggctgaagcc cgccatccgg gagaagatcc tggcccacat ggacgatctg 780 aageteteet gggaeetgge caaggtgege acegaeetge eeetggaggt ggaettegee 840 aaaaggeggg ageeegaeeg ggagaggett agggeettte tggagagget tgagtttgge 900 agectectee aegagttegg cettetggaa agececaagg ceetggagga ggeceettgg 960 cccccgccgg aaggggcctt cgtgggcttt gtgctttccc gcaaggagcc catgtgggcc gatettetgg ceetggeege egecagggge ggeegegtge acegggeage agacecettg 1020 1080 geggggetaa aggaceteaa ggaggteegg ggeeteeteg eeaaggacet egeegtettg 1140 geetegaggg aggggetaga cetegtgeee ggggaegaee ceatgeteet egeetacete ctgggcccct ccaacaccac ccccgagggg gtggcgcggc gctacggggg ggagtggacg 1200 gaggacgccg cccaccgggc cctcctctcg gagaggctcc atcggaacct ccttaagcgc 1260 ctcgagggg aggagaagct cctttggctc taccacgagg tggaaaagcc cctctcccgg 1320 1380 gtcctggccc acatggaggc caccggggta cggctggacg tggcctacct tcaggccctt 1440 tecetggage ttgeggagga gateegeege etegaggagg aggtetteeg ettggeggge 1500 caccccttca acctcaactc ccgggaccag ctggaaaggg tgctctttga cgagcttagg 1560 ettecegeet tgaagaagae gaagaagaea ggeaageget ceaceagege egeggtgetg 1620 gaggeeetae gggaggeeea ceceategtg gagaagatee tecageaceg ggageteace 1680 aageteaaga acacetaegt ggaceceete ecaageeteg tecaeeegag gaegggeege ctccacaccc gcttcaacca gacggccacg gccacgggga ggcttagtag ctccgacccc 1740 1800 aacctgcaga acatccccgt ccgcaccccc ttgggccaga ggatccgccg ggccttcgtg 1860

60

gccgaggcgg gttgggcgtt ggtggccctg gactatagcc agatagagct ccgcgtcctc

1920 qcccacctct ccqqqqacqa aaacctqatc agggtcttcc aggaggggaa ggacatccac acccagaccg caagetggat gtteggegte ceeeeggagg cegtggacce cetgatgege 1980 cgggcggcca agacggtgaa cttcggcgtc ctctacggca tgtccgccca taggctctcc 2040 2100 caggagettg ceateceeta egaggaggeg gtggeettta tagagegeta ettecaaage ttccccaagg tgcgggcctg gatagaaaag accctggagg aggggaggaa gcggggctac 2160 gtggaaaccc tcttcggaag aaggcgctac gtgcccgacc tcaacgcccg ggtgaagagc 2220 2280 qtcaqqqaqq ccqcqqaqcq catggccttc aacatgcccg tccagggcac cgccgccgac ctcatgaagc tegecatggt gaagetette eecegeetee gggagatggg ggeeegeatg 2340 ctcctccagg tcgccaacga gctcctcctg gaggcccccc aagcgcgggc cgaggaggtg 2400 geggetttgg ccaaggagge catggagaag geetateeee tegeegtgee cetggaggtg 2460 2517 gaggtgggga tgggggggga ctggctttcc gccaagggtc accaccacca ccaccac

<210> 2857

<211> 839

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic

<400> 2857

Met Asn Ser Gly Met Leu Pro Leu Phe Glu Pro Lys Gly Arg Val Leu
1 5 10 15

Leu Val Asp Gly His His Leu Ala Tyr Arg Thr Arg His Ala Leu Lys 20 25 30

Gly Leu Thr Thr Ser Arg Gly Glu Pro Val Gln Ala Val Tyr Gly Phe 35 40 45

Ala Lys Ser Leu Leu Lys Ala Leu Lys Glu Asp Gly Asp Ala Val Ile 50 55 60

Val Val Phe Asp Ala Lys Ala Pro Ser Phe Arg His Glu Ala Tyr Gly 65 70 75 80

Gly Tyr Lys Ala Gly Arg Ala Pro Thr Pro Glu Asp Phe Pro Arg Gln 85 90 95

Leu	Ala	Leu	Ile 100	Lys	Glu	Leu	Val	Asp 105	Leu	Leu	Gly	Leu	Ala 110	Arg	Leu
Glu	Val	Pro 115	Gly	Tyr	Glu	Ala	Asp 120	Asp	Val	Leu	Ala	Ser 125	Leu	Ala	Lys
Lys	Ala 130	Glu	Lys	Glu	Gly	Tyr 135	Glu	Val	Arg	Ile	Leu 140	Thr	Ala	Asp	Lys
Asp 145	Leu	Tyr	Gln	Leu	Leu 150	Ser	Asp	Arg	Ile	His 155	Val	Leu	His	Pro	Glu 160
Gly	Tyr	Leu	Ile	Thr 165	Pro	Ala	Trp	Leu	Trp 170	Glu	Lys	Tyr	Gly	Leu 175	Arg
Pro	Asp	Gln	Trp 180	Ala	Asp	Tyr	Arg	Ala 185	Leu	Thr	Gly	Asp	Glu 190	Ser	Asp
Asn	Leu	Pro 195	Gly	Val	Lys	Gly	Ile 200	Gly	Glu	Lys	Thr	Ala 205	Arg	Lys	Leu
Leu	Glu 210	Glu	Trp	Gly	Ser	Leu 215	Glu	Ala	Leu	Leu	Lys 220	Asn	Leu	Asp	Arg
Leu 225	Lys	Pro	Ala	Ile	Arg 230	Glu	Lys	Ile	Leu	Ala 235	His	Met	Asp	Asp	Leu 240
Lys	Leu	Ser	Trp	Asp 245	Leu	Ala	Lys	Val	Arg 250	Thr	Asp	Leu	Pro	Leu 255	Glu
Val	Asp	Phe	Ala 260	Lys	Arg	Arg	Glu	Pro 265	Asp	Arg	Glu	Arg	Leu 270	Arg	Ala
Phe	Leu	Glu 275	Arg	Leu	Glu	Phe	Gly 280	Ser	Leu	Leu	His	Glu 285	Phe	Gly	Leu
Leu	Glu 290	Ser	Pro	Lys	Ala	Leu 295	Glu	Glu	Ala	Pro	Trp 300	Pro	Pro	Pro	Glu
Gly 305	Ala	Phe	Val	Gly	Phe 310	Val	Leu	Ser	Arg	Lys 315	Glu	Pro	Met	Trp	Ala 320
Asp	Leu	Leu	Ala	Leu 325	Ala	Ala	Ala	Arg	Gly 330	Gly	Arg	Val	His	Arg 335	Ala
Ala	Asp	Pro	Leu 340	Ala	Gly	Leu	Lys	Asp 345	Leu	Lys	Glu	Val	Arg 350	Gly	Leu

Leu Ala Lys 355	Asp Leu	Ala Val	Leu 360	Ala	Ser	Arg	Glu	Gly 365	Leu	Asp	Leu
Val Pro Gly 370	Asp Asp	Pro Met 375		Leu	Ala	Tyr	Leu 380	Leu	Gly	Pro	Ser
Asn Thr Thr 385	Pro Glu	Gly Val 390	Ala	Arg	Arg	Tyr 395	Gly	Gly	Glu	Trp	Thr 400
Glu Asp Ala	Ala His 405	Arg Ala	Leu	Leu	Ser 410	Glu	Arg	Leu	His	Arg 415	Asn
Leu Leu Lys	Arg Leu 420	Glu Gly	Glu	Glu 425	Lys	Leu	Leu	Trp	Leu 430	Tyr	His
Glu Val Glu 435	Lys Pro	Leu Ser	Arg 440	Val	Leu	Ala	His	Met 445	Glu	Ala	Thr
Gly Val Arg 450	Leu Asp	Val Ala 455	_	Leu	Gln	Ala	Leu 460	Ser	Leu	Glu	Leu
Ala Glu Glu 465	Ile Arg	Arg Leu 470	Glu	Glu	Glu	Val 475	Phe	Arg	Leu	Ala	Gly 480
His Pro Phe	Asn Leu 485	Asn Ser	Arg	Asp	Gln 490	Leu	Glu	Arg	Val	Leu 495	Phe
Asp Glu Leu	Arg Leu 500	Pro Ala	Leu	Lys 505	Lys	Thr	Lys	Lys	Thr 510	Gly	Lys
Arg Ser Thr 515	Ser Ala	Ala Val	Leu 520	Glu	Ala	Leu	Arg	Glu 525	Ala	His	Pro
Ile Val Glu 530	Lys Ile	Leu Gln 535		Arg	Glu	Leu	Thr 540	Lys	Leu	Lys	Asn
Thr Tyr Val 545	Asp Pro	Leu Pro 550	Ser	Leu	Val	His 555	Pro	Arg	Thr	Gly	Arg 560
Leu His Thr	Arg Phe 565	Asn Gln	Thr	Ala	Thr 570	Ala	Thr	Gly	Arg	Leu 575	Ser
Ser Ser Asp	Pro Asn 580	Leu Gln	Asn	Ile 585	Pro	Val	Arg	Thr	Pro 590	Leu	Gly
Gln Arg Ile	Arg Arg	Ala Phe	Val	Ala	Glu	Ala	Gly	Trp	Ala	Leu	Val

Ala Leu Asp Tyr Ser Gln Ile Glu Leu Arg Val Leu Ala His Leu Ser 610 620

Gly Asp Glu Asn Leu Ile Arg Val Phe Gln Glu Gly Lys Asp Ile His 625 635 635

Thr Gln Thr Ala Ser Trp Met Phe Gly Val Pro Pro Glu Ala Val Asp
645 650 655

Pro Leu Met Arg Arg Ala Ala Lys Thr Val Asn Phe Gly Val Leu Tyr 660 665 670

Gly Met Ser Ala His Arg Leu Ser Gln Glu Leu Ala Ile Pro Tyr Glu 675 680 685

Glu Ala Val Ala Phe Ile Glu Arg Tyr Phe Gln Ser Phe Pro Lys Val 690 695 700

Arg Ala Trp Ile Glu Lys Thr Leu Glu Glu Gly Arg Lys Arg Gly Tyr 705 710 715 720

Val Glu Thr Leu Phe Gly Arg Arg Tyr Val Pro Asp Leu Asn Ala 725 730 735

Arg Val Lys Ser Val Arg Glu Ala Ala Glu Arg Met Ala Phe Asn Met 740 745 750

Pro Val Gln Gly Thr Ala Ala Asp Leu Met Lys Leu Ala Met Val Lys 755 760 765

Leu Phe Pro Arg Leu Arg Glu Met Gly Ala Arg Met Leu Leu Gln Val 770 780

Ala Asn Glu Leu Leu Glu Ala Pro Gln Ala Arg Ala Glu Glu Val 785 790 795 800

Ala Ala Leu Ala Lys Glu Ala Met Glu Lys Ala Tyr Pro Leu Ala Val 805 810 815

Pro Leu Glu Val Glu Val Gly Met Gly Glu Asp Trp Leu Ser Ala Lys 820 825 830

Gly His His His His His His 835

<210>	2858	
<211>	31	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2858 cctc ctggaccctt cgaacaccac c	31
ogooda		
<210>	2859	
<211>	31	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggtggt	2859 gttc gaagggtcca ggaggtaggc g	31
<210>		
<211>	28	
<212>		
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> ggtacg	2860 gegg gaegtggeet acetteag	28
<210>	2861	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
	2861 gtag gccacgtccc gccgtacc	28
<210>	2862	
<211>	39	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cacctg	2862 geet acegeaceeg ettegeeetg aagggeete	39
<210>	2863	
<211>	39	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaggcc	2863 cttc agggcgaagc gggtgcggta ggccaggtg	39
<210>	2864	
<211>	42	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cacctg	2864 geet acegeaceeg ecaegeeetg aagggeetea ee	42

<210>	2865	
<211>	42	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggtgag	2865 gccc ttcagggcgt ggcgggtgcg gtaggccagg tg	42
<210>	2866	
<211>	42	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2866 goot acogoaccog cogogocotg aagggootca co	42
J		
<210>	2867	
<211>	42	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> ggtgag	2867 gccc ttcagggcgc ggcgggtgcg gtaggccagg tg	42
<210>	2868	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<220>		
<221>	misc_feature	
<222>	(3)(3)	
<223>	The residue at this position is linked to a Z28 quenching group	
<400> cactgc		13
<210>	2869	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2869 agca agtggtgcgc ctcgttt	27
<210>	2870	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccaggaa		27
<210>	2871	
<211>	27	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ccagga	2871 agca agtgacgcag cgacggt	27
<210>	2872	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	2872 cgcc tcgtcatcag ggat	24
<210>	2873	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2873 tggg aagcccaga	19
000000	0333 443000434	
<210>	2874	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cttgca	2874 ggca ggt	13

<210>	2875	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2875 gatg acgaggc	17
<210>	2876	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	2876 egce tecageaggt tg	22
<210>	2877	
<211>	23	
<212>		
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> actctag	2877 gttt ttccttctcc tta	23
<210>	2878	
<211>	15	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> gcaatc	2878 tegg tetge	15
<210>	2879 '	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccaagg	2879 tgct ggaggc	16
<210>	2880	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	2880 cgcc tcagaggcag gg	22
<210>	2881	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggctcag	2881 gggt cattgaggc	19

<210>	2882	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2882 cctc ctc	13
cgaagg		
<210>	2883	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2883 ctct gaggc	15
J		
<210>	2884	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	2884 cgcc tcccttttgc cagttg	26
<210>	2885	
<211>	27	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> gctctg	2885 cagg attttcatgt caccata	27
<210>	2886	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctccag	2886 atat ccaagaagag	20
<210>	2887	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2887 gcaa aagggaggcg	20
gaaceg	3044 4433343303	
<210>	2888	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic ,	
<400> aacgag	2888 gege accettttge cagttg	26

<210>	2889	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		19
gaactg	gcaa aagggtgcg	1,
<210>	2890	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2890 legee teeettttge eagtta	26
oogeou		
<210>	2891	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gctctg	2891 cagg attttcatgt caccata	27
<210>	2892	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> ctccag	2892 atat ccaagaagag	20
<210>	2893	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaactg	2893 gcaa aagggaggcg	20
<210>	2894	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	2894 cgcc tcccttttgc cagttt	26
<210>	2895	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	2895 cgcc tcagttgttt ccgtc	25

<210>	2896	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2896 acaa acgaggtttt ccaaggc	27
494994		
<210>	2897	
<211>	29	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agctaa	2897 gatc cctggatcag atttagaga	29
<210>		
<211>		
<212>		
<213>	Artificial Sequence	
<220>		
<223>		
<400> aacgga	2898 aaca actgaggcg	19
.0.1.0	2000	
<210>	2899	
<211>		
<212>		
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> ccgtca	2899 cgcc tcagttgttt ccgtt	25
<210>	2900	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> ccgtca	2900 cgcc tcagttgttt ccgtc	25
<210>	2901	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agctaa	2901 gatc cctgga	16
<210>	2902	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	2902 cgcc tcagttgttt ccgtg	25

<210>	2903	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2903 cgcc tctcatcttt tgggg	25
cogcoa	0300 20000000 03333	
<210>	2904	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2904 gaag cagcccta	18
55 5		
<210>	2905	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>	r	
<223>	Synthetic	
<400> tccgtc	2905 aact tcaaagaaca g	21
_		
<210>	2906	
<211>	19	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ccccaa	2906 aaga tgagaggcg	19
<210>	2907	
<211>	22	
<212>	AND	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	2907 cgcc tctgtcgttg ct	22
<210>	2908	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cccaag	2908 gcca caggtattta	20
<210>	2909	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tggttc	2909 tcct tgtacaaag	19

<210>	2910	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2910 gaca gaggcg	16
agoaao	3404 343303	_
<210>	2911	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccqtca	2911 cgcc tcctttcatt acacag	26
<210>	2912	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2912 gtgt gccgta	16
222 23		
<210>	2913	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> gacagg	2913 tata gattettee	20
<210>	2914	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctgtgt	2914 aatg aaaggaggcg	20
<210>	2915	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	2915 cgcc tcccctttag ttttacaa	28
<210>	2916	
<211>	29	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaattg	2916 gcac tcaaatgtgt tgtcagaga	29

<210>	2917	
<211>	32	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2917 ctct gatattgctg atgaaattct ca	32
ougoou	odde gadaeegeeg megaaneese en	
<210>	2918	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gttgta	2918 aaac taaaggggag gcg	23
3 3		
<210>	2919	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	2919 gege acceetttâg ttttaca	27
<210>	2920	
<211>		
<212>		
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> acagtt	2920 actc tgatattgct g	21
<210>	2921	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ttgtaa	2921 aact aaaggcgtgc g	21
<210>	2922	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	2922 .cgcc tcccctttag ttttacaa	28
<210>	2923	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cagtta	2923 ctct gatattgctg	20

<2	10>	2924	
<2	11>	20	
<2	12>	DNA	
<2	13>	Artificial Sequence	
<22	20>		
<22	23>	Synthetic	
		2924 acta aaggggaggc	20
Lg.	Laaa	acta aaggggagge	20
<2	10>	2925	
<2	11>	21	
<2	12>	DNA	
<2	13>	Artificial Sequence	
<22	20>		
<22	23>	Synthetic	
		2925 actc tgatattgct g	21
uo			
<2	10>	2926	
<2	11>	23	
<2	12>	DNA	
<2	13>	Artificial Sequence	
<22	20>		
<22	23>	Synthetic	
	00>	2926 egec teeteetgtg ace	23
CC	geeu		
<2	10>	2927	
<2	11>	29	
<2	12>	DNA	
<2.	13>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> acatcc	2927 atct ccgtgcatgg cgtccctta	29
<210>	2928	
<211>	29	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tcggtt	2928 caaa atgccgatga tctctctca	29
<210>	2929	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> ggtcac	agga ggaggcg	17
<210>	2930	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	2930 cgcc tcctcctgtg acc	23

<210>	2931	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2931 caaa atgccgatga	20
<210>	2932	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2932 cgcc tcctcctgtg aca	23
<210>	2933	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2933 cgcc tcctcctgtg ac	22
Jogoda	-3	- <b>-</b>
<210>	2934	
<211>	21	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ctcggt	2934 tcaa aatgccgatg a	21
<210>	2935	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	2935 egee teeteetgtg act	23
<210>	2936	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	2936 egec tetetttet cattt	25
<210>	2937	
<211>	32	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gttcat	2937 acaa tcagaattgc cattgcacaa ca	32

<210>	2938	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2938 tttc ccagagaac	19
000030	·	
<210>	2939	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aaatga	2939 gaaa agagaggc	18
<210>		
<211>	22	
<212>		
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> ccgtca	2940 cgcc tcagggaagg cc	22
<210>	2941	
<211>	22	
<212>	DNA  Problégica de Composição	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> tcctct	2941 ccgg acttgtgaag tc	22
<210>	2942	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gtggtt	2942 gtca ccagcat	17
<210>	2943	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggcctt	2943 ccct gagcc	15
<210>	2944	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	2944 cgcc tcagtggtat cct	23

<210>	2945	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggtata	2945 gaca ggtctgttgg gc	22
<210>	2946	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctgtga	2946 agtc tcctc	15
<210>	2947	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aggata	2947 ccac tgaggc	16
<210>	2948	
<211>	22	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ccgtca	2948 egec teggttetec ac	22
<210>	2949	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> caggct	2949 ggaa atggaggctg ca	22
<210>	2950	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaagga	2950 cacg gtgtcgttgt ca	22
<210>	2951	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gtggag	2951 aacc gaggcg	16

<210>	2952	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2952 cgcc teetgtacae gagag	25
cegeca	egee teetgedede gagag	
<210>	2953	
<211>	23	
<212>	DNA .	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggtggt	2953 gatg gtggtgatgg cta	23
<210>	2954	
<211>	21	
<212>		
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> agagag	2954 accg ggatagatag c	21
0.4.5		
<210>	2955	
<211>		
<212>		
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> ctctcg	2955 tgta caggaggc	18
<210>	2956	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	2956 gege acecaccaag agg	23
<210>	2957	
<211>	30	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aggcgt	2957 ccag aagaggaaga agacaacaaa	30
<210>	2958	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> atgagc	2958 ctaa tggctc	16

<210>	2959	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		17
CCLCLL	ggtg ggtgcgc	Ι,
<210>	2960	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2960 octaa tggctctggc	20
403430		
<210>	2961	
<211>	· 27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2961 gege aegettgaet aetaaca	27
<210>	2962	
<211>	18	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ggctgt	2962 gcac cgcgtttc	18
<210>	2963	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
.220		
<220>		
	Synthetic	
<400> cattcc	2963 agct ccgt	14
<210>	2964	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgttag	2964 tagt caagcgtccg c	21
<210>	2965	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	2965 gege aegttecate tte	23

<210>	2966	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2966 aggg gtactggtca c	21
cegega	aggg geaeeggeea e	
<210>	2967	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2967 gact tete	14
3		
<210>	2968	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaagat	2968 ggaa cgtgcgc	17
J J -		
<210>	2969	
<211>	21	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> aacgag	2969 gcgc acccctctgt t	21
<210>	2970	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tcctgt	2970 agtt tctgagtcaa agagta	26
<210>	2971	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cttgaa	2971 gttc tctggcg	17
<210>	2972	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacaga	2972 gggg tgcgc	15

<210>	2973	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2973 .cgcc teceetetgt te	22
cegeca		
<210>	2974	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2974 Jaggg gaggcg	16
9		
<210>	2975	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2975 .cgcc tcagatgatc tgagt	25
cogcoa		
<210>	2976	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> acaggc	·2976 ttgt cactcgaatt ttgagac	27
<210>	2977	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gtgagg	2977 gtct ggg	13
<210>	2978	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> actcaga	2978 atca tetgaggeg	19
<210>	2979	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	2979 gege actgatgate tgagt	25

<210>	2980	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
		19
acceag	acca tetgegege	
<210>	2981	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
		24
3		
<210>	2982	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
		22
<210>	2983	
<211>	14	
<212>	DNA	
	<211> <212> <213> <220> <223> <400> actcaga <211> <211> <212> <213> <213> <220> <2213> <400> ccgtcad <210> <211> <212> <213> <210> <211> <212> <213> <211> <212> <213>	<pre>&lt;211&gt; 19 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; &lt;223&gt; Synthetic &lt;400&gt; 2980 actcagatca tctgtgcgc  &lt;211&gt; 24 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; &lt;223&gt; Synthetic &lt;400&gt; 2981 &lt;211&gt; 24 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; &lt;223&gt; Synthetic &lt;400&gt; 2981 ccgtcacgcc tctgggaact tctc &lt;210&gt; 2982 &lt;211&gt; 22 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; &lt;221&gt; 2982 &lt;211&gt; 22 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence &lt;220&gt; &lt;221&gt; 2982 &lt;211&gt; 22 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence</pre>

<220>		
<223>	Synthetic	
<400> atccct	2983 ttgg ggac	14
<210>	2984	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gagaag	2984 ttcc cagaggcg	18
<210>	2985	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	2985 cgcc tcctgagtag tt	22
<210>	2986	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2986 agca tcttgtgttt a	21

<210>	2987	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2987 agct ctgagcac	18
geegaa	agec etgageae	
<210>	2988	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aactac	2988 tcag gaggcg	16
<210>	2989	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	2989 gcgc acctctggca ag	22
2 3		
<210>	2990	
<211>	16	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ggggcc	2990 gcaa caggga	16
<210>	2991	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cggggg	2991 acac ccg	13
<210>	2992	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctttgc	2992 caga ggtgcgc	17
<210>	2993	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	2993 egec tecatgetet gttt	24

<210>	2994	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2994 gttc agggta	16
990049	,	
<210>	2995	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	2995 cttg gggtta	16
<210>	2996	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aaacag	2996 yagca tggaggc	17
<210>	2997	
<211>	23	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ccgtca	2997 cgcc tcagttgctg agg	23
<210>	2998	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cagcgc	2998 geet gggttgae	18
<210>	2999	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tttgcg	2999 taga ccgg	14
<210>	3000	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cctcag	3000 caac tgaggc	16

<210>	3001	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3001 egec tecatgetet gttte	25
<210>	3002	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3002 ttgg ggttact	17
55		
<210>	3003	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaaaca	3003 gagc atggaggc	18
<210>	3004	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> ccgtca	3004 cgcc tccgtagacc ggc	23
<210>	3005	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400>		
	tgaa gttgctgagg tttga	25
<210>	3006	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3006 ctgt gcagg	15
55005		
<210>	3007	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gccggt	3007 ctac ggaggc	16

<210>	3008	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3008 gcgc actaagagcg ca	2
440545	<u> </u>	
<210>	3009	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3009 gaca gggaaagttt ctca	2
<210>	3010	
<211>	12	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3010 cgct gg	1
<b>J</b>		
<210>	3011	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> tgcgct	3011 ctta gtgcgc	16
<210>	3012	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3012 gege acteggaegg	20
<210>	3013	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3013 ataa ggtccgctca	20
J J		
<210>	3014	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaggaa	3014 cgag gcgttga	17

<210>	3015	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3015 gagt gcgc	14
cogcoc	3030 3030	
<210>	3016	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3016 cgcc tcctcggacg gg	22
J		
<210>	3017	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gttact	3017 gtag ccataaggtc cgcta	25
J		
<210>	3018	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> tggttc	3018 gagg cgttga	16
<210>	3019	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cccgtc	3019 cgag gaggc	15
<210>	3020	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3020 cgcc tcaaggtccg ct	22
<210>	3021	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gatctt	3021 gggg ttactgtagc catc	24

<210>	3022	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		16
cccgga	cggg aggaac	10
<210>	3023	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3023 cctt gagg	14
<210>	3024	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> aacgag	3024 gege acetgtegtt gag	23
<210>		
<211>		
<212>		
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> caggac	3025 ttgg gcgagctga	19
<210>	3026	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agggta	3026 gggg aagac	15
<210>	3027	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctcaac	3027 gaca ggtgcgc	17
<210>	3028	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3028 cgcc tccggcaagg g	21

<210>	3029	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgctat	3029 gggc aaagtttcgt ggatga	26
<210>	3030	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ttgcgg	3030 accg ctg	13
<210>	3031	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cccttg	3031 ecgg aggc	14
<210>	3032	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	

<220>		`
<223>	Synthetic	
<400> ccgtcac	3032 egcc teegggtgtt gta	23
<210>	3033	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gagagto	3033 egeg teettgeta	19
<210>	3034	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agttcca	3034 agtg caaagt	16
<210>	3035	
<211>	16	
<212>	DNA	
	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tacaaca	3035 accc ggaggc	16

<210>	3036	
<211>	24	
<212>	DNA .	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3036 cgcc tcttgtgctg.atgt	24
<210>	3037	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaggga	3037 ggcg ctgcgtaga	19
<210>	3038	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gtggag	3038 acgt ggcac	15
<210>	3039	
<211>	17	
<212>	DNA	

<220>		
<223>	Synthetic	
	3039 agcac aagaggc	17
<210>	3040	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3040 ggcgc actcgaggtc a	21
<210>	3041 .	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3041 caccg agtcgtaga	19
33003		
<210>	3042	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3042 cctgt tggtgaag	18
_		

<210>	3043	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3043 cgag tgcgc	15
tgacct	cyay tycyc	13
<210>	3044	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3044 gcgc acatgcggca	20
<210>	3045	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3045 gggc aaagtttcgt ggc	23
J		
<210>	3046	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> agggtt	3046 gcgg accg	14
<210>	3047	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgccgca	3047 atgt gcgc	14
<210>	3048	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgagg	3048 gege acetgetggt g	21
<210>	3049	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgttcc	3049 teet eagagtega	19

<210>	3050	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3050 ggtg tct	13
gragac	ggrg coc	
<210>	3051	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3051 cagg tgcgc	15
<b>.</b>		
<210>	3052	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3052 gege acceagtggg c	21
<210>	3053	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	

	<220>		
	<223>	Synthetic	
	<400> cgtggc	3053 acct cttgaggaa	19
	<210>	3054	
	<211>	16	
	<212>	DNA	
	<213>	Artificial Sequence	
	<220>		
	<223>	Synthetic	
		3054 gagg tttgct	16
	<210>	3055	
	<211>	14	
	<212>	DNA	
	<213>	Artificial Sequence	
	<220>		
		Synthetic	
	<400>		
		gggt gcgc	14
	<210>	3056	
	<211>	14	
	<212>	DNA	
•	<213>	Artificial Sequence	
	<220>		
	<223>	Synthetic	

<220>

(221)	misc_reacure	
<222>	(3)(3)	
<223>	The residue at this position is linked to a Z28 quenching group	Ģ.
<400>	3056 tcag tgcg	14
00000		
<210>	3057	
<211>	29	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3057 gaga atgaggtgat ctcggcggt	29
ogouge	<u> </u>	
<210>	3058	
<211>	32	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3058 agat cacgtagttg aggtcaatga ag	32
<210>	3059	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
•		
<220>		
<223>	Synthetic	

<400> ggaatc	3059 atat tggaacatgt aaaccatc	28
<210>	3060	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3060 tgac ctcaactacg tgatct	26
<210>	3061	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3061 atac tggaacatgt agaccatc	28
<210>	3062	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> ggagtc	3062 atac tggaacatgt agaccatc	28
	3063	
<211>	23	

<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgccg	3063 agat cacccatccc act	23
<210>	3064	
<211>	33	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3064 gttt tetetttatt gtggtegaet tta	33
<210>	3065	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> tctgca	3065 cctg cacc	14
<210>	3066	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	

<220>

<223>	Synthetic	
<400> gtggga	3066 tggg tgatc	15
<210>	3067	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgccg	3067 agat cacccatccc ac	22
<210>	3068	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cgtttt	3068 ctct ttattgtggt cgacttta	28
<210>	3069	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ttctgc	3069 acct gcac	14
<210>	3070	

<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3070 agat caccttctgc acc	23
<210>	3071	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctttat	3071 tgtg gtcgactttc catcccaa	28
<210>	3072	
<211>	12	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgcacc	3072 aggg cc	12
<210>	3073	
<211>	16	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ggtgcag	3073 gaag gtgatc	16
<210>	3074	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgccga	3074 agat caccaccagg gc	22
<210>	3075	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccatcco	3075 cact totgoacotg a	21
<210>	3076	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cccgcca	3076 atct agg	13

> 3077	
> 14	
> DNA	
> Artificial Sequence	
>	
> Synthetic	
	14
ggtggt gate	1.3
> 3078	
> 24	
> DNA	
> Artificial Sequence	
>	
> Synthetic	
	24
> 3079	
> 25	
> DNA	
> Artificial Sequence	
>	
> Synthetic	
	25
January 1 - January 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	_ <del>-</del>
> 3080	
> 19	
> DNA	
	<pre>&gt; 14 &gt; DNA &gt; Artificial Sequence  &gt; Synthetic &gt; 3077 ggtggt gatc  &gt; 3078 &gt; 24 &gt; DNA &gt; Artificial Sequence  &gt; Synthetic &gt; 3078 cgagat caccgaattc cacg &gt; 3079 &gt; 25 &gt; DNA &gt; Artificial Sequence  &gt; 3079 &gt; 25 &gt; DNA &gt; Artificial Sequence</pre> > 3079 > 27 > 3079 > 28 > 3079 > 29 > 3079 > 3079 > 29 > 3079 > 3079 > 3079 > 3080 > 19

<220>		
<223>	Synthetic	
<400> cccagt	3080 ttga aggaaatct	19
<210>	3081	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cgtgga	3081 attc ggtgatc	17
210	2000	
<210>		
<211>		
<212>		
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgccg	3082 agat caccgaattc cacgc	25
<210>	3083	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3083	

ccagtttgaa ggaaatctcg

<210>	3084	•
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3084 gagat caccatcgaa ttccacg	27
cegee	gagae caccaccgaa ecccacg	
<210>	3085	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	. 3085 Etgteg tetgeggtga ttta	24
<210>	3086	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
	3086 httga aggaaatct	19
<210>		
<211>		
<212>		
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> gtggaa	3087 ttcg atggtgatc	19
<210>	3088	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgccg	3088 agat cacccgaact teegeg	26
<210>	3089	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcaaga	3089 gcga gaaccctgga	20
<210>	3090	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cgcgga	3090 agtt cgggtgatc	19

<210>	3091	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3091 agat cacgcaagag cgagaacc	28
005005		
<210>	3092	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggcggt	3092 taga gcagacgcgc	20
<210>	3093	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3093 cgct cttgcgtgat c	21
<210>	3094	
<211>	26	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ccgccg	3094 agat cacgcctatg tccttc	26
<210>	3095	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tcaggt	3095 cgct tagtccaact taatgaac	28
<210>	3096	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaagga	3096 cata ggcgtgatc	.19
<210>	3097	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
.220-		
<220>		
	Synthetic	
<400>	3097 agat cacgtcgctt agtcc	25

<210>	3098	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3098 cagt cgaatcatcc attcagc	27
ggcaga		_
<210>	3099	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3099 agcg acgtgatc	18
994004		
<210>	3100	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3100 agat cacgcctatg tcctt	25
cogocg		
<210>	3101	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> aggtcg	3101 ctta gtccaactta atgaac	26
<210>	3102	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3102 ctga cggaagcact gtc	23
<210>	3103	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3103 atag gcgtgatc	18
<210>	3104	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		
ccgccg	agat cacgetteeg atgtact	27

<210>	3105	
<211>	34	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcatgt	3105 aatc tgcaacattc tggcccatga tgta	34
<210>	3106	
<211>	39	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tctgca	3106 ttaa attoottgot ttoagaatoa taaccaggg	39
<210>	3107	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agtaca	3107 tcgg aagcgtgatc	20
<210>	3108	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> ccgccg	3108 agat cacgcttccg a	21
<210>	3109	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcaaca	3109 ttct ggcccatgat gt	22
<210>	3110	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgtact	3110 tctg cattaaattc ct	22
<210>	3111	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tcggaa	3111 gcgt gatc	14

<210>	3112	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		26
cegeeg	agat cactgggtca tcttct	20
<210>	3113	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3113 gaa ggtctcaaac atgatca	27
333030	agua ggoodaano aegueen	
<210>	3114	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3114 gac ccagtgatc	19
.5 5 44		
<210>	3115	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> ccgccg	3115 agat cacagcagcc gtgg	24
<210>	3116	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccaggg	3116 agga gctggac	17
<210>	3117	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccacgg	3117 ctgc tgtgatc	17
<210>	3118	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
-400>	3110	

ccgccgagat cactgggtca tctttt

<210>	3119	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gggtgt	3119 tgaa ggtctcaaac atgatca	27
<210>	3120	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aaaaga	3120 tgac ccagtgatc	19
<210>	3121	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgccg	3121 agat cactgggtca tc	22
<210>	3122	
<211>	27	
<212>	DNA .	

<220>		
<223>	Synthetic	
<400> gggtgt	3122 tgaa ggtctcaaac atgatca	27
<210>	3123	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ttttca	3123 cggt tggcc	15
<210>	3124	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
•		
<220>		
<223>	Synthetic	
<400> gatgac	3124 ccag tgatc	15
<210>	3125	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgccg	3125 agat cacatagete ttea	24

3126	
23	
DNA	
Artificial Sequence	
Synthetic	
	23
tiga ciggicatta cac	2,
3127	
25	
AND	
Artificial Sequence	
Synthetic	
	25
eada acceacages acagg	
3128	
17	
DNA	
Artificial Sequence	
Synthetic	
3128 gcta_tgtgatc	17
3004 <b>0</b> 303400	- '
3129	
27	
NA	
	DNA Artificial Sequence  Synthetic 3126 tttga ctggtcatta cac  3127 25 DNA Artificial Sequence  Synthetic 3127 ttaaa atctacagtc atagg  3128 17 DNA Artificial Sequence  Synthetic 3129 27

<220>		
<223>	Synthetic	
<400> ccgccga	3129 agat cactttgaac aagttgg	27
<210>	3130	
<211>	33	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gggaac	3130 tgct gacaaagatt cactggtaat aaa	33
<210>	3131	
<211>	31	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aaaata	3131 cagt caacattact gaaacactac t	31
<210>	3132	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccaacti	3132 tgtt caaagtgatc	20

<210>	3133	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3133 agat cacctggttg ttt	23
<210>	3134	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3134 cagc cttaatccta	20
999		
<210>	3135	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gttatc	3135 tggt tgttcttca	19
<210>	3136	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> aaacaa	3136 ccag gtgatc	16
<210>	3137	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgccg	3137 agat cacaccgact t	21
<210>	3138	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cctagg	3138 tggc tcataaggac tc	22
<210>	3139	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggctcc	3139 attg tcca	14

<210>	3140	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aagtcg	3140 gtgt gatc	14
<210>	3141	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgccg	3141 agat caccccatcc a	21
<210>	3142	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctttca	3142 ggac cacagtccaa ga	22
<210>	3143	
<211>	14	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> gccagc	3143 aggt atgc	14
<210>	3144	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tggatg	3144 gggt gatc	14
<210>	3145	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgccg	3145 agat caccttcctt gg	22
<210>	3146	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctcttc	3146 acgg cgcttgcgtg a	21

<210>	3147	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tcttag	3147 acct gcgagcc	17
<210>	3148	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccaagg	3148 aagg tgatc	15
<210>	3149	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctcccg	3149 gege tttegtga	18
<210>	3150	
<211>	17	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> tcttag	3150 acct gcgagcc	17
<210>	3151	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgccg	3151 agat cactgcttcc ttg	23
<210>	3152	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gctctt	3152 cacg gcgcttgcga	20
<210>	3153	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gtctta	3153 gacc tgcgagcc	18

<210>	3154	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> caagga	3154 agca gtgatc	16
<210>	3155	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cctccc	3155 ggcg ctttcga	17
<210>	3156	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agcctc	3156 aaga tcatcgtgat ct	22
<210>	3157	
<211>	14	
<212>	DNA	

```
<220>
<223> Synthetic
<220>
<221> misc_feature
<222> (3)..(3)
<223> The residue at this position is linked to a Z28 quenching group.
<400> 3157
                                                                     14
ctcttctcag tgcg
<210> 3158
<211> 13
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic
<220>
<221> misc_feature
<222> (3)..(3)
<223> The residue at this position is linked to a Z28 quenching group.
<400> 3158
                                                                     13
cactgcttcg tgg
<210> 3159
<211> 28
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic
```

<400> 3159

ccagga	agca agtggtgatc tcggcggt	28
<210>	3160	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<220>		
<221>	misc_feature	
<222>	(3)(3)	
<223>	The residue at this position is linked to a Z28 quenching group	p.
	3160	14
CECEEC	tcag tgcg	14
<210>	3161	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<220>		
<221>	misc_feature	
<222>	(3)(3)	
<223>	The residue at this position is linked to a Z28 quenching ground	p.
<400>	3161	14
CLULLO	ccag tgcg	7-4
<210>	3162	

<211> 13

```
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic
<220>
<221> misc_feature
<222> (3)..(3)
<223> The residue at this position is linked to a Z28 quenching group.
<400> 3162
tccactccga gct
                                                                     13
<210> 3163
<211> 13
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic
<220>
<221> misc_feature
<222> (3)..(3)
<223> The residue at this position is linked to a Z28 quenching group.
<400> 3163
                                                                     13
tccactccga gct
<210> 3164
<211> 27
<212> DNA
```

<220>		
<223>	Synthetic	
<400> agctcgg	3164 gagt aggagtgcgc ctcgttt	27
<210>	3165	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agcacg	3165 gagt aggagtgcgc ctcgttt	27
<210>	3166	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agcccg	3166 gagt aggagtgcgc ctcgttt	27
<210>	3167	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agcgcgg	3167 gagt aggagtgcgc ctcgttt	27

<210>	3168	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>	·	
<223>	Synthetic	
<400> agcgcg	3168 gagt aggagtgcgc ctcgttt	27
<210>	3169	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<220>		
<221>	modified_base	
<222>	(3)(3)	
<223>	The residue at this position is a30.	
<400> ccagga	3169 agca agtggtgcgc ctcgttt	27
<210>	3170	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
.222		
<220>		
<223>	Synthetic	
<220>		

- 2207 -

١,

```
<221> modified_base
<222> (3)..(3)
<223> The residue at this position is a30.
<220>
<221> modified_base
<222> (26)..(26)
<223> The residue at this position is u33.
<400> 3170
                                                                     27
ccaggaagca agtggtgcgc ctcgtut
<210> 3171
<211> 27
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic
<220>
<221> modified_base
<222> (3)..(3)
<223> The residue at this position is a30.
<220>
<221> modified_base
<222> (6)..(6)
<223> The residue at this position is a30.
<220>
<221> modified_base
```

<222> (26)..(26)

<223> The residue at this position is u33.

<400> 3171 ccaggaagca agtggtgcgc ctcgtut

- <210> 3172
- <211> 27
- <212> DNA
- <213> Artificial Sequence
- <220>
- <223> Synthetic
- <220>
- <221> modified\_base
- <222> (3)..(3)
- <223> The residue at this position is a30.
- <220>
- <221> modified\_base
- <222> (6)..(6)
- <223> The residue at this position is a30.
- <220>
- <221> modified\_base
- <222> (7)..(7)
- <223> The residue at this position is a30.
- <220>
- <221> modified\_base
- <222> (26)..(26)
- <223> The residue at this position is u33.

```
<210> 3173
<211> 27
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic
<220>
<221> modified_base
<222> (3)..(3)
<223> The residue at this position is a30.
<220>
<221> modified_base
<222> (6)..(6)
<223> The residue at this position is a30.
<220>
<221> modified_base
<222> (7)..(7)
<223> The residue at this position is a30.
<220>
<221> modified_base
<222> (10)..(10)
<223> The residue at this position is a30.
```

<220>

<221> modified\_base

```
<222> (26)..(26)
<223> The residue at this position is u33.
<400> 3173
                                                                     27
ccaggaagca agtggtgcgc ctcgtut
<210> 3174
<211> 27
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic
<220>
<221> modified_base
<222> (3)..(3)
<223> The residue at this position is a30.
<220>
<221> modified base
<222> (6)..(6)
<223> The residue at this position is a30.
<220>
<221> modified_base
<222> (7)..(7)
<223> The residue at this position is a30.
<220>
<221> modified_base
<222> (10)..(10)
```

<223> The residue at this position is a30.

```
<220>
<221> modified_base
<222> (11)..(11)
<223> The residue at this position is a30.
<220>
<221> modified_base
<222> (26)..(26)
<223> The residue at this position is u33.
<400> 3174
                                                                     27
ccaggaagca agtggtgcgc ctcgtut
<210> 3175
<211> 13
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic
<220>
<221> misc_feature
<222> (3)..(3)
<223> The residue at this position is linked to a Z28 quenching group.
<400> 3175
cactgcttcg tgg
                                                                     13
<210> 3176
<211> 27
<212> DNA
```

<220>		
<223>	Synthetic	
<400> ccaggaa	3176 agca agtggtgcgc ctcgttt	27
<210>	3177	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccagga	3177 agca agtggaggcg tgacggt	27
<210>	3178	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3178 egec tegececaca	20
<210>	3179	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cttttc	3179 cata ctttttatga cattc	25

<210>	3180	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3180 gcga ggcg	14
-9-999	g-ga gg-g	
<210>	3181	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3181 gcga ggcg	14
- 5 - 5 5 5		
<210>	3182	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3182 cgcc tcatggataa tgccc	25
<210>	3183	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> cagagg	3183 aaag agagctgcag gg	22
<210>	3184	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gggcat	3184 tatc catgaggcg	19
<210>	3185	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gggcat	3185 tatc catgaggcg	19
<210>	3186	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcagaa	3186 aaca gteegtgege	20

<210>	3187	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3187 cgcc tcagagccaa tcac	24
ccgcca	cyce ceagageeaa ceae	
<210>	3188	
<211>	31	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> 3188 ctgatcaatc tccttttgga ctttctctgc g 33		31
<b>J</b>		
<210>	3189	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gtgatt	3189 ggct ctgaggcg	18
- <b>-</b>		
<210>	3190	
<211>	18	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> gtgatt	3190 ggct ctgaggcg	18
<210>	3191	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3191 cgcc tccaccatat ccc	23
<210>	3192	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cggaag	3192 aatg ggtcgaccat g	21
<210>	3193	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
-400>	2102	

gggatatggt ggaggcg

<210>	3194	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gggata	3194 tggt ggaggcg	17
<210>	3195	
<211>	30	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gccatg	3195 attt tgacataggg tttgaggatg	30
<210>	3196	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggactc	3196 tgtc aagtgcgc	18
<210>	3197	
<211>	22	
<212>	DNA	

<220>			
<223>	Synthetic		
<400> aacgag	3197 gege aegeaaeteg ea		22
<210>	3198		
<211>	22		
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>	Synthetic		
<400> aacgag	3198 gege aegeaacteg ca		22
<210>	3199		
<211>	22		
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>	Synthetic		
<400>	3199 gcgc acgcaactcg ca		22
<210>	3200		
<211>	22		
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>	Synthetic		
<400> aacgag	3200 gcgc acgcaactcg ca		22

<210>	3201	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacqaq	3201 gege aegeaacteg ca	22
<210>	3202	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3202 gege aegeaaeteg ea	22
<210>	·	
<211>		
<212>		
<213>	Artificial Sequence	
200		
<220>		
	Synthetic	
<400> aacgag	3203 gege aegeaacteg ca	22
010	2004	
<210>	3204	
<211>	18	
<212>		
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> ggcctg	3204 caga gactctgc	18
<210>	3205	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gccact	3205 gcta agcac	15
<210>	3206	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgcgag	3206 ttgc gtgcgc	16
<210>	3207	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3207 gege acetecaate tea	23

<210>	3208	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		23
aacyay	gege acetecaate tea	۷.
<210>	3209	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3209 gege acetecaate tea	23
aacgag		۷.
<210>	3210	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		23
aacgag	gege acetecaate tea	2.
<210>	3211	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> aacgag	3211 gege acetecaate tea	23
<210>	3212	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3212 gege acetecaate tea	23
<210>	3213	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3213 gege acetecaate tea	23
<210>	3214	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3214 ctaa gatttatacc cttcta	26

```
<210> 3215
  <211> 15
  <212> DNA
  <213> Artificial Sequence
  <220>
  <223> Synthetic
  <400> 3215
                                                                      15
  gccaaatctc ctcca
  <210> 3216
  <211> 17
  <212> DNA
  <213> Artificial Sequence
  <220>
<223> Synthetic
  <400> 3216
                                                                      17
  tgagattgga ggtgcgc
  <210> 3217
  <211> 13
  <212> DNA
  <213> Artificial Sequence
  <220>
  <223> Synthetic
  <220>
  <221> misc_feature
  <222> (3)..(3)
  <223> The residue at this position is linked to a Z28 quenching group.
```

<400> 3217

cactgcttcg tgg

<210>	3218	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3218 agca agtggtgcgc ctcgttt	27
004554		
<210>	3219	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccagga	3219 agca agtggaggcg tgacggt	27
<210>		
<211>		
<212>		
<213>	Artificial Sequence	
222		
<220>		
	Synthetic	
<400> ccagga	3220 agca agtgacgcag cgacggt	27
-210-	2221	
<210>	3221	
<211>		
<212>		
<213>	Artificial Sequence	

·	
Synthetic	
3221 gege accaccatat ec	22
3222	
22	
DNA	
Artificial Sequence	
Synthetic	
3222 gaat gggtcgacca tg	22
3223	
16	
DNA	
Artificial Sequence	
Synthetic	
3223 gata atacac	16
3224	
18	
DNA	
Artificial Sequence	
Synthetic	
3224 gaat gggtcgac	18
	Synthetic 3221 ggegc accaccatat cc  3222 22 DNA Artificial Sequence  Synthetic 3222 ggast gggtcgacca tg  3223 16 DNA Artificial Sequence  Synthetic 3223 16 DNA Artificial Sequence  Synthetic 3223 gggtg gtgcgc  3224 18 DNA Artificial Sequence

<210>	3225	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3225 cgcc tcggttgagg ttc	23
ccgcca		
<210>	3226	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3226 ctga attcactgtg	20
- 55 - 55		
<210>	3227	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaacct	3227 caac cgaggcg	17
<210>	3228	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> tggtgg	3228 ctga attcact	17
<210>	3229	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3229 cgcc tcggttgagg tt	22
<210>	3230	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctggtg	3230 gctg aattcactgt g	21
<210>	3231	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Symthotic	
<400>	3/231	

aacctcaacc gaggcg

<210>	3232	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3232 gctg aattcac	17
ccggcg	geeg adecede	
<210>	3233	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3233 gege acegageeca	20
<i>-</i>		
<210>	3234	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcatca	3234 ccac catgcgctga	20
J = 3		
<210>	3235	
<211>	18	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> cgtaca	3235 gcgt gaacaccg	18
<210>	3236	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcatca	3236 ccac catgcgctga	20
<210>	3237	
<211>	21	
<212>	NA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3237 gege accetgagtg c	21
<210>		
<211>	17	
<212>		
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		
gctggc	cttg ggtctta	17

<210>	3239	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		1.5
ttccag	cagg aagtg	15
<210>	3240	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3240 aggg tgcgc	15
gcacco	aggg tgcgc	1.
<210>	3241	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3241 gege acceaegage a	21
aacyay	gogo accoacgago a	2.1
<210>	3242	
<211>	23	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ctgtgc	3242 tttt ccttctccat tta	23
<210>	3243	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggcagt	3243 cggt gagg	14
<210>	3244	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgctcg	3244 tggg tgcgc	15
<210>	3245	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3245	

aacgaggcgc acttggcact ac

<210>	3246	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
		28
<210>	3247	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
		24
5.00.00	and deagageest gaga	
<210>	3248	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gactgte	3248 geec ttgg	14
<210>	3249	
<211>	16	
<212>	DNA	
	<211> <212> <213> <220> <223> <400> ggttgtd <210> <211> <212> <213> <212> <213> <400> gtcatad <210> <221> <223> <400> gtcatad <210> <211> <212> <213> <211> <212> <213>	<pre>&lt;211&gt; 28 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; &lt;223&gt; Synthetic &lt;400&gt; 3246 ggttgtcata caaaacagag tccagaga  &lt;210&gt; 3247 &lt;211&gt; 24 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; &lt;223&gt; Synthetic &lt;400&gt; 3247  &lt;211&gt; 14 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; &lt;223&gt; Synthetic &lt;400&gt; 3247 gtcatacaaa acagagtcca gaga  &lt;210&gt; 3248 &lt;211&gt; 14 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; &lt;221&gt; 3248 &lt;211&gt; 14 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence</pre> <220> 221> 3248  <210> 3248  <211> 14 <212> DNA <213> Artificial Sequence

<220>		
<223>	Synthetic	
<400> gtagtg	3249 ccaa gtgcgc	16
<210>	3250	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3250 gege aettggeagg aca	23
<210>	3251	
<211>	29	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gctaca	3251 gaaa tgagggcaaa aagatgaga	29
<210>	3252	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3252	

ctcagcagaa ggatgg

<210>	3253	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3253 gcca agtgcgc	17
cgcccc	geed dgegege	
<210>	3254	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctcaqc	3254 agag gatgg	15
5		
<210>	3255	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3255 egec tettggeagg aca	23
<210>	3256	
<211>	17	
<212>	DNA	

L 7
2.2
. 7
.6

<210>	3260	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3260 gcgc acttggcagg a	21
aacgag	gege acteggeagg a	21
<210>	3261	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cactca	3261 gcag aaggatgg	18
<210>	3262	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tcctgc	3262 caag tgcgc	15
3		
<210>	3263	
<211>	22	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> aacgag	3263 gege aceegattgt ee	22
<210>	3264	
<211>	30	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gatttc	3264 taag aacattttaa ttcatgatga	30
<210>	3265	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3265 tctg agaactgaag g	21
<210>	3266	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggacaa	3266 togg gtgogo	16

<210>	3267	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3267 cgcc tcccgattgt cc	22
cegeca		
<210>	3268	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggacaa	3268 tcgg gaggcg	16
<210>	3269	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> aacgag	3269 gcgc actactatta tttcatag	28
<210>		
<211>		
<212>		
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> catttc	3270 tatc tactgttctg catcaga	27
<210>	3271	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aaaaga	3271 tgag gcatacatta atttc	25
<210>	3272	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctatga	3272 aata atagtagtgc gc	22
<210>	3273	
<211>	29	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3273 gcgc actactatta tttcataga	29

<210>	3274	
<211>	24	
<212	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3274 Stgagg catacattaa tttc	24
<210>	3275	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	gaaat aatagtagtg cgc	23
00000		
<210>	3276	
<211>	29	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtc	3276 acgcc tctactatta tttcataga	29
<210>	3277	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> tctatg	3277 aaat aatagtagag gcg	23
<210>	3278	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3278 gege acaggtgtet ggag	24
<210>	3279	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggtcca	3279 cgca caagctggga c	21
<210>	3280	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> taaaag	3280 ctac agaaatgagg gc	22

<210>	3281	
<211>	18 .	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctccag	3281 acac ctgtgcgc	18
<210>	3282	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3282 cgcc tcaggtgtct ggag	24
cogcoa		2.
<210>	3283	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctccag	3283 acac ctgaggcg	18
<210>	3284	
<211>	25	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> aacgag	3284 gcgc acaggtgtct ggagt	25
<210>	3285	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aaaagc	3285 taca gaaatgaggg c	21
<210>	3286	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> actcca	3286 gaca cctgtgcgc	19
<210>	3287	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gagcaa	3287 acct catgycaatr cac	23

<210>	3288	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3288 ycca aagggcag	18
cccacc	yeea aagggeag	
<210>	3289	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3289 gege aettttgete ee	22
<210>	3290	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3290 agag caggactcgt ga	22
JJ		
<210>	3291	
<211>	16	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> tgagag	3291 ccac tgtaag	16
<210>	3292	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gggagca	3292 aaaa gtgcgc	16
<210>	3293	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3293 egec tettttgete ee	22
<210>	3294	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3294	

gggagcaaaa gaggcg

<210>	3295	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3295 gcgc acgttgtgat acctt	25
aaogag		
<210>	3296	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gatgaa	3296 ggcc ataaattaaa attgtgc	27
<210>		
<211>		
<212>		
<213>	Artificial Sequence	
<220>		
<223>		
<400> tgggta	3297 tgga acgtcc	16
010	2000	
<210>	3298	
<211>	19	
<212>	DNA  Partificial Consequent	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> aaggta	3298 tcac aacgtgcgc	19
<210>	3299	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3299 cgcc tcgttgtgat acctt	25
<210>	3300	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aaggta	3300 tcac aacgaggcg	19
<210>	3301	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> aacgag	3301 gege acttgtgata ecttt	25

	<210>	3302	
	<211>	28	
	<212>	DNA	
	<213>	Artificial Sequence	
	<220>		
	<223>	Synthetic	
	<400> gatgaaq	3302 ggcc ataaattaaa attgtgga	28
	<210>	3303	
<i>t</i>	<211>	17	
	<212>	DNA	
	<213>	Artificial Sequence	
	<220>		
	<223>	Synthetic	
	<400> gggtate	3303 ggaa cgtccat	17
	<210>	3304	
	<211>	19	
	<212>	DNA	
	<213>	Artificial Sequence	
	<220>		
	<223>	Synthetic	
	<400> aaaggta	3304 atca caagtgcgc	19
	<210>	3305	
	<211>	25	
	<212>	DNA	

<210>	3309	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3309 ctgg tgg	13
555466		
<210>	3310	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		17
J <b>J</b>		
<210>	3311	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
	•	
<220>	·	
<223>	Synthetic	
<400>	3311 cgcc tcccataggg acc	23
5		
<210>	3312	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> ggtccc	3312 tatg ggaggcg	17
<210>	3313	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3313 gege acatgaeggg acac	24
<210>	3314	
<211>	29	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gctaca	3314 gaaa tgagggcaaa aaaatgagc	29
<210>	3315	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tcagca	3315 gagg atggg	15

tcagcagagg atggg

<210>	3316	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3316 cgtc atgtgcgc	18
gegeee	egec acgegege	10
<210>	3317	
<211>	24	
<212>	DNA	•
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3317 cgcc tcatgacggg acac	24
J		
<210>	3318	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3318 cgtc atgaggcg	18
909000		
<210>	3319	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	

<220>	
<223> Synthetic	
<400> 3319 aacgaggcgc actgactttc tgtg	24
<210> 3320	
<211> 27	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 3320 cgtcttttct ccataatagg ctttgaa	27
<210> 3321	
<211> 19	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 3321 atcagatgct gtctttggt	19
<210> 3322	
<211> 18	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 3322 cacagaaagt cagtgcgc	18

<210>	3323	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3323 tgct gtctttggt	19
goodga		
<210>	3324	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> ctaaga	3324 tgat gtatttggt	19
<210>		
<211>		
<212>		
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> ctgaga	3325 tgct gtctttggt	19
-210:	2226	
<210>		
<211>		
<212>		
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> atcaga	3326 ggcc gtctttggt	19
<210>	3327	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> atcaga	3327 ggcc gtctttg	17
<210>	3328	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3328 gege acceggttet c	21
<210>	3329	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400>		
	ctcc gggtagaacg aa	22

<210>	3330	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3330 gtag ttcac	15
900000	jeug ceeue	
<210>	3331	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3331 eggg tgege	15
<210>	3332	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3332 gege acaetegaag e	21
5 5.	<del></del>	
<210>	3333	
<211>	17	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ggcggg	3333 atgc cgctcac	17
<210>	3334	
<211>	11	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcccca		11
<210>	3335	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcttcg	3335 agtg tgcgc	15
010		
<210>		
<211>		
<212>		
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400>	3336	
aacgag	gcgc acggtacgcc t	21

<210>	3337		
<211>	15		
<212>	DNA		
<213>	Artificial	Sequence	
<220>			
<223>	Synthetic		
<400>	3337 gtgg cccac	-	15
caccyg	grgg cccac	•	_
<210>	3338		
<211>	15		
<212>	DNA		
<213>	Artificial	Sequence	
<220>			
<223>	Synthetic		
<400>	3338 tctc cttca	1	LS
<i>33 3</i>			
<210>	3339		
<211>	15		
<212>	DNA		
<213>	Artificial	Sequence	
<220>			
<223>	Synthetic		
<400>	3339 accg tgcgc	1	L S
<210>	3340		
<211>	22		
<212>	DNA		

<220>		
<223>	Synthetic	
<400> aacgag	3340 gege aeggtaegee te	22
<210>	3341	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggcgat	3341 ctcc ttcat	15
<210>	3342	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaggcg	3342 tacc gtgcgc	16
<210>	3343	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3343	

ccgtcacgcc tcggtacgcc tc

<210>	3344	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		16
gaggcg	tacc gaggcg	10
<210>	3345	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3345 gege aegtaegeet e	21
aacgag	gege degedegeet e	
<210>	3346	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3346 tggc ccagc	15
~~~333	-555-	
<210>	3347	
<211>	15	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> gaggcg	3347 tacg tgcgc	15
<210>	3348	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtcg	3348 ctgc gtgctcaact c	21
<210>	3349	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gccggc	3349 ggga tgccc	15
<210>	3350	
<211>	12	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaagcg	3350 cccc ag	12

<210>	3351	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3351 agca cgcagc	16
gageeg	agea egeage	
<210>	3352	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3352 gcgc accagcacca tg	22
3 3		
<210>	3353	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcgatc	3353 teet teatettggt a	21
<210>	3354	
<211>	20	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> cagtct	3354 cctt catcttggta	20
<210>	3355	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcgatc	3355 teet teatettggt a	21
<210>	3356	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> catggt	3356 gctg gtgcgc	16
<210>	3357	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
	3357	
	gcgc accatggccc	20

<210>	3358	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3358 gttg tcgcgcgta	19
caggee	geeg eegegegea	
<210>	3359	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3359 gttg tcgcgcgta	19
343300		
<210>	3360	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3360 cctc gta	13
000050		
<210>	3361	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> gggcca	3361 tggt gcgc	14
<210>	3362	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400>		
	gcgc accacctgga tca	23
<210>	3363	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3363 cgcc ctcgtaa	17
<210>	3364	
<211>	11	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>		
<400> gcaccc	3364 cggg c	11

<210>	3365	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3365 aggt ggtgege	17
tgatee		,
<210>	3366	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3366 gcgc actcagcacc a	21
, ,		
<210>	3367	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggcgat	3367 ctcc ttcatcttgg a	21
<210>	3368	
<211>	21	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> tgcagt	3368 ctcc ttcatcttgg a	21
<210>	3369	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tggacg	3369 agat ctcctc	16
<210>	3370	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3370 tgag tgcgc	15
<210>	3371	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3371	

aacgaggcgc acccactagc tc

<210>	3372	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agttca	3372 gttc ctgaagggag ta	22
<210>	2272	
<211>		
<212>		
	Artificial Sequence	
(215)	Artificial bequence	
<220>		
	Synthetic	
<400>		
	taat gtccagc	17
<210>	3374	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3374	
gagcta	gtgg gtgcgc	16
<210>	3375	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> aacgag	3375 gege accettgtet e	21
<210>	3376	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cgtcct	3376 caca ccaggaaact cata	24
<210>	3377	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3377 agcc ttcc	14
<210>	3378	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gagaca	3378 . aggg tgcgc	15

<210>	3379	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		23
aacyay	gcgc accttctcat ctc	4.5
<210>	3380	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3380 gttc agcccatca	19
geaceg	geee ageeeaca	
<210>	3381	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3381 aaat cagggagt	18
994099	adac cagggage	
<210>	3382	
<211>	17	
<212>	DNA ·	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> gagatg	3382 agaa ggtgcgc	17
<210>	3383	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3383 cgcc tccttctcat ctc	23
<210>	3384	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3384 agaa ggaggcg	17
J. J J		
<210>	3385	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtcg	3385 ctgc gtcttctcat ctc	23

<210>	3386	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3386 agaa gacgcag	17
gagacg	agaa gaegeag	
<210>	3387	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3387 gcgc accettetea te	22
5 5		
<210>	3388	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<b>&lt;220&gt;</b>		
<223>	Synthetic	
<400> gcatcg	3388 gttc agcccata	18
, ,		
<210>	3389	
<211>	19	
<212>	DNA	

<220>	•	
<223>	Synthetic	
<400> tcggat	3389 ggaa atcagggag	19
<210>	3390	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gatgag	3390 aagg gtgcgc	16
<210>	3391	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3391 egec tecettetea te	22
<210>	3392	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3392	

gatgagaagg gaggcg

<210>	3393	
<211>	29	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3393 gcgc acgagagatg aggagaggg	29
uucgug	gege degagagaeg aggagaggg	
<210>	3394	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3394 ggaa aggacagaca ggaaa	25
<210>	3395	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3395 cctc atctctcgtg cgc	23
<210>	3396	
<211>	28	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> aacgag	3396 gcgc acgagagatg aggagagg	28
<210>	3397	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gccagg	3397 aaag gacagacagg aac	23
<210>	3398	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3398 ctca tctctcgtgc gc	22
<210>	3399	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3399 gcgc actggaggaa actcag	26

<210	> 3400	
<211	> 29	
<212	> DNA	
<213	> Artificial Sequence	
<220	>	
<223	> Synthetic	
	> 3400 ttcaag ctaataaaga tatcatgaa	29
9944	occas coaccass caccacsas	
<210	> 3401	
<211	> 19	
<212	> DNA	
<213	> Artificial Sequence	
<220	>	
<223	> Synthetic	
<400 agct	> 3401 ccaata ggtacagcc	19
<210	> 3402	
	> 20	
	> DNA	
<213	> Artificial Sequence	
<220		
<223		
<400 ctga	> 3402 gtttcc tccagtgcgc	20
.010	2402	
<210		
<211		
<212		
<213	> Artificial Sequence	

<220>		
<223>	Synthetic	
<400> aacgag	3403 gege acteetttee aag	23
<210>	3404	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> caagag	3404 tgtg ggatctgagt tgaa	24
<210>	3405	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3405 agca tggcc	15
<210>	3406	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cttggaa	3406 aagg agtgcgc	17

<210>	3407	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3407 agca tggcctcctc	20
geaege		
<210>	3408	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3408 gege aeteggeeea	20
, ,		
<210>	3409	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> ccatct	3409 gtca cgtcatacct ga	22
<210>		
<211>		
<212>		
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> gccatca	3410 actg ccc	13
<210>	3411	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgggcc	3411 gagt gcgc	14
<210>	3412	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3412 gtca cgtcatacct ga	22
<210>	3413	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgagg	3413 gege aegteetgtg e	21

<210>	3414	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>	•	
<223>	Synthetic	
<400> agtctt	3414 ttcc aattcgctcc tc	22
<210>	3415	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3415 gatc tgtgtcttc	19
accego		
<210>	3416	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcacag	3416 gacg tgcgc	15
<210>	3417	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> ccgtca	3417 cgcc tcgtcctgtg c	21
<210>	3418	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcacag	3418 gacg aggcg	15
<210>	3419	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3419 gege acettette ataag	25
<210>	3420	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3420	
cttctt	tcgt agttctgcat tgcga	25

<210	> 3421	
<211	> 23	
<212	> DNA	
<213	> Artificial Sequence	
<220	>	
<223	> Synthetic	
	> 3421 agaatt taaagctctt ttg	23
ccac	agaace caaageceee eeg	23
<210	> 3422	
<211	> 19	
<212	> DNA	
<213	> Artificial Sequence	
<220	>	
<223	> Synthetic	
	> 3422 cgaaag aaggtgcgc	19
<210	> 3423	
<211	> 25	
<212	> DNA	
<213	> Artificial Sequence	
<220		
	> Synthetic	
<400 ccgt	> 3423 cacgee teettettte ataag	25
<210		
<211		
<212		
<213	> Artificial Sequence	

<220>		
<223>	Synthetic	
<400> cttatg	3424 aaag aaggaggcg	19
<210>	3425	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Complete	
	Synthetic	
<400> ccgtca	3425 egee tegtettgge e	21
<210>	3426	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcccag	3426 agaa tagcgaggtg ca	22
<210>	3427	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ttctcc	3427 atgt cgtcaaaggt gg	22

<210>	3428	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3428 agacg aggcg	15
99000	agacg aggeg	
<210>	3429	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3429 ggcgc acctttcagt tttg	24
<210>	3430	
<211>	32	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3430 gtcat gttcacaggt aagaatttct ga	32
cccac	geode geeodoagge dagadeeeee ga	•
<210>	3431	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> ctttct	3431 caga tcttggc	17
<210>	3432	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400>		
	tgaa aggtgcgc	18
<210>	3433	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3433 cgcc tcctttcagt tttg	24
<210>	3434	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> caaaac	3434 tgaa aggaggcg	18

<210>	3435
<211>	13 .
<212>	DNA
<213>	Artificial Sequence
<220>	
<223>	Synthetic
<220>	
<221>	misc_feature
<222>	(3)(3)
<223>	The residue at this position is linked to a Z28 quenching group.
<400>	3435 ttcg tgg
cactge	ticg tag
<210>	3436
<211>	27
<212>	DNA .
<213>	Artificial Sequence
<220>	
<223>	Synthetic
<400>	3436 agca agtggtgcgc ctcgttt 27
ccayya	agca agtggtgcgc ctcgttt 27
<210>	3437
<211>	27
<212>	DNA
<213>	Artificial Sequence
<220>	
<223>	Synthetic
<400>	3437

ccagga	agca agtggaggcg tgacggt	27
<210>	3438	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		2.7
ccagga	agca agtgacgcag cgacggt	27
<210>	3439	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		22
aacgaggcgc actcagtgga gag 23		
<210>	3440	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3440 cctc gtgagca	17
ggcccg	cete gegagea	1,
<210>	3441	
<211>	16	
<212>	DNA	

<220>		
	Complete	
	Synthetic	
<400> gtaagc	3441 cacc acgatg	16
<210>	3442	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		16
teteca	ctga gtgcgc	10
<210>	3443	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		21
aacgag	gcgc acccaggtgt g	21
<210>	3444	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	

<400> tcactg	3444 cagg gacttaccca ga	22
<210>	3445	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgtgtc	3445 tgag ccc	13
-27.0	2446	
<210>		
<211> <212>	DNA	
	Artificial Sequence	
<213>	Arcilicial Sequence	
<220>		
	Synthetic	
<400>	3446	
acacct	gggt gcgc	14
<210>	3447	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3447 gege acceaggtgt	20
<210>		
<211>	14	

<212>	DNA	
<213>	Artificial Sequence	
	•	
<220>		
<223>	Synthetic	
<400> gtgtgt	3448 ctga gccc	14
<210>	3449	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
	•	
<220>		
<223>	Synthetic	
<400>	3449 gcgc accetteete t	21
	3-3	
<210>	3450	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3450 ggag ggctgga	17
<210>	3451	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	

<220>

<223>	Synthetic	
<400> tgggac	3451 tatt gatcaggg	18
<210>	3452	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agagga	3452 aggg tgcgc	15
<210>	3453	
<211>		
<212>		
<213>	Artificial Sequence	
<220>	Complete to the control of the contr	
	Synthetic	
<400> aacgag	gcgc accttcatta ttggc	25
<210>	3454	
<211>		
<212>		
<213>	Artificial Sequence	
	·	
<220>		
<223>	Synthetic	
<400>		24
CCaCaa	gett eegagtgegt eata	4
<210>	3455	

<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3455 aaac gacttettgg	20
33		
<210>	3456	
<211>	19	
<212>		
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> gccaat	3456 aatg aaggtgcgc	19
<210>		
<211>		
<212>		
<213>	Artificial Sequence	
222		
<220>	Complete	
	Synthetic	
<400> aacgag	3457 gege acegetgegt	20
<210>	3458	
<211>	17	
<211>	DNA	
~4147	DITE	

<220>			
<223>	Synthetic		
<400> ggccctg	3458 gcac ctcagaa		17
<210>	3459		
<211>	14		
<212>	DNA		
<213>	Artificial	Sequence	
<220>			
<223>	Synthetic		
<400> gtgagct	3459 :tct gggg		14
<210>	3460		
<211>	14		
<212>	DNA		
<213>	Artificial	Sequence	
<220>			
<223>	Synthetic		
<400> acgcago	3460 eggt gege		14
<210>	3461		
<211>	21		
<212>	DNA		
<213>	Artificial	Sequence	
<220>			
<223>	Synthetic		
<400>	3461		

aacgaggcgc acctgtccgt c

<210>	3462	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cagatt	3462 cagc cagagtgtga agtaga	26
<210>	3463	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ttcttg	3463 gagc aaaggtag	18
<210>	3464	
<211>	16	
<212>	DNA ·	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agacgg	3464 acag gtgcgc	16
<210>	3465	
<211>	22	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> aacgag	3465 gege acetgteegt et	22
<210>	3466	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tcttgg	3466 agca aaggtagt	18
<210>	3467	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3467 gege acceagagtg tg	22
<210>	3468	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcagaa	3468 gcag ttccagattc aga	23

<210>	3469	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aagtago	3469 etgt cegtet	16
<210>	3470	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3470 etgg gtgege	16
<210>	3471	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgagg	3471 gege acceagagtg t	21
<210>	3472	
<211>	16	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> gaagta	3472 gctg tccgtc	16
<210>	3473	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3473 gcgc accagaaagt agagca	26
<210>	3474	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agactt	3474 gtgg ctgccgctga	20
<210>	3475	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400×	3475	

tgtacacgtt gcccatg

```
<210> 3476
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic
<400> 3476
                                                                     20
tgctctactt tctggtgcgc
<210> 3477
<211> 13
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic
<220>
<221> misc_feature
<222> (3)..(3)
<223> The residue at this position is linked to a Z28 quenching group.
<400> 3477
cactgcttcg tgg
                                                                     13
<210> 3478
<211> 27
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic
<400> 3478
```

ccaggaagca agtggtgcgc ctcgttt

<210	> 3479	
<211	> 27	
<212	> DNA	
<213	> Artificial Sequence	
<220	•	
<223	> Synthetic	
	> 3479 gaagca agtggaggcg tgacggt	27
ccag	Jaagea ageggaggeg egaegge	
<210	> 3480	
<211	> 27	
<212	> DNA	
<213	> Artificial Sequence	
<220		
<223	> Synthetic	
	> 3480 gaagca agtgacgcag cgacggt	27
<210	> 3481	
<211	> 23	
<212	> DNA	
<213	> Artificial Sequence	
<220		
	> Synthetic	
	> 3481 aggege accatgegga tet	23
<210		
<211		
<212		
<213	> Artificial Sequence	

<220>		
<223>	Synthetic	
<400> gccttc	3482 cctc ggagcgaa	18
<210>	3483	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223> -	Synthetic	
<400> gctgca	3483 tctg cttgga	16
<210>	3484	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agatcc	3484 gcat ggtgcgc	17
010		
<210>		
<211>		
<212>		
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3485 gege acetgeacat cae	23

<210>	3486	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3486 gtct ccagtcttta tcaga	25
	good congestion congu	
<210>	3487	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> tcagaa	3487 tttc aatggtgcc	19
<210>		
<211>		
<212>		
<213>	Artificial Sequence	
.220.		
<220>	Synthotic	
<400>	Synthetic 3488	
	tgca ggtgcgc	17
<210>	3489	
<211>		
<212>	DNA	
	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> aacgag	3489 gcgc acctgcacat cact	24
<210>	3490	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cagaat	3490 ttca atggtgcct	19
<210>	3491	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3491 gcgc acctccacag acaa	24
<210>	3492	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cagtaag	3492 gtgg gaaggtgtac tcagta	26

<210>	3493	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
		14
cgccag	gaeg eget	
<210>	3494	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> 3494 ttqtctqtqq aqqtqcqc 18		
J		
<210>	3495	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3495 gcgc acctccaggt g	21
	, <u> </u>	
<210>	3496	
<211>	20	
<212>	DNA	
	<211> <212> <213> <220> <223> <400> tgccagg <211> <212> <211> <212> <213> <400> ttgtctg <221> <223> <400> ttgtctg <210> <221> <213> <210> <211> <211> <212> <211> <211> <211> <211>	<pre>&lt;211&gt; 14 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; &lt;223&gt; Synthetic &lt;400&gt; 3493 tgccaggacg cgct  &lt;211&gt; 18 &lt;211&gt; 18 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; &lt;223&gt; Synthetic &lt;400</pre>

<220>		
<223>	Synthetic	
<400> tctcca	3496 gagc tgggttgtta	20
<210>	3497	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcccct	3497 gata gcc	13
<210>	3498	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> acctgg	3498 aggt gcgc	14
<210>		
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3499 gcgc accatgcgga tctg	24

<210>	3500	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gccttc	3500 cctc ggagcgaa	18
<210>	3501	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3501 ctgc ttggag	16
_		
<210>	3502	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cagato	3502 · cgca tggtgcgc	18
<210>	3503	
<211>	24	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> aacgag	3503 gege acacatgegg atet	24
<210>	3504	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gccttc	3504 cctc ggagcgc	17
<210>	3505	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gctgca	3505 tctg cttgg	15
<210>	3506	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3506 gcat gtgtgcgc	18

<210>	3507	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3507 cgcc tcccattatg ctaca	25
3		
<210>	3508	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> ttgtcc	3508 ccgt acttgatgtt gta	23
<210>	3509	
<211>		
<212>		
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> gtcaaa	3509 cagc actggc	16
<210>	3510	
<211>	19	
<212>	DNA Artificial Somence	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> tgtagca	3510 ataa tgggaggcg	19
<210>	3511	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3511 gege acceattatg ctaca	25
<210>	3512	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgtagca	3512 ataa tgggtgcgc	19
<210>	3513	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgagg	3513 gcgc acggagacaa tcc	23

<210>	3514	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3514 cage actggeteet ge	22
gccaaa		
<210>	3515	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>	•	
<223>	Synthetic	
<400>	3515 Egga acggaggaac	20
-55-		
<210>	3516	
<211>	17	
<212>	DNA .	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggattg	3516 toto ogtgogo	17
<210>	3517	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	

<220>	
<223> Synthetic	·
<400> 3517 ccgtcacgcc tcggagacaa tcc	23
<210> 3518	
<211> 17	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 3518 ggattgtctc cgaggcg	17
<210> 3519	
<211> 23	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 3519 aacgaggcgc acggattccg tat	23
<210> 3520	
<211> 26	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 3520 agccatatcc agaagcaaga tcttgc	26

<210>	3521	
<211>	12	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		12
gagggc	tegg ge	12
<210>	3522	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3522 aatc cgtgcgc	17
acacgg	auce egegege	
<210>	3523	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3523 cgcc tcggattccg tat	23
cogcca	egee teggatteeg tat	
<210>	3524	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> atacgg	3524 gaatc cgaggcg	17
<210>	3525	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3525 gege acettetgge	20
<210>	3526	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctcttg	3526 gcago togtgcaga	19
<210>	3527	
<211>	11	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcgcgc	3527 cctc t	11

<210>	3528	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gccaga	3528 aggt gcgc	14
<210>	3529	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3529 gcgc accttctggc g	21
3 3		
<210>	3530	
<211>	12	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>		
<400> cgcgcc	3530 ctct tg	12
<210>	3531	
<211>	21	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> aacgag	3531 gege acegetgtag g	21
<210>	3532	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gctggc	3532 gcag ctcgta	16
<210>	3533	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gggccag	3533 gatg cgt	13
<210>	3534	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cctacaç	3534 gegg tgege	15

<210>	3535	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3535 gcgc acctcagcct t	21
Jaacgag	gege deceedgeer t	
<210>	3536	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggccgt	3536 gtgt ggttactgag a	21
<210>	3537	
<211>	13	
<212>		
	Artificial Sequence	
•		
<220>		
	Synthetic	
<400> gggcgt	3537 ggtg tgc	13
<210>	3538	
<211>		
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> aaggct	3538 gagg tgcgc	15
<210>	3539	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
220		
<220>		
	Synthetic	
<400> aacgag	3539 gege aceteageet tg	22
<210>	3540	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3540 gtgt gcg	13
<210>	3541	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Completia	
	Synthetic	
<400> aacgag	3541 gege accageettg g	21

<210>	3542	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3542 gtgg ttactgagct a	21
ccgcgc	gegg tracegager a	~ _
<210>	3543	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>	·	
<223>	Synthetic	
<400>	3543 tgtg cgg	13
5-5-55		
<210>	3544	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccaagg	3544 etgg tgege	15
23		
<210>	3545	
<211>	20	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> aacgag	3545 gege aegeteette	20
<210>	3546	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
.220		
<220>		
	Synthetic	
<400> gctcct	3546 gete etgtge	16
<210>	3547	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgctgt	3547 tgct cacattc	17
<210>	3548	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaagga	3548 gegt gege	14

<210>	3549	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3549 gege aegeteette t	21
aacgag	gege aegeteette t	
<210>	3550	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3550 gctc acattct	17
JJ		
<210>	3551	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3551 Egec tegeteette tge	23
<210>	3552	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> cagctc	3552 ctgc tcctgtgc	18
<210>	3553	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> tgttgc	3553 tcac attettgete agge	24
<210>	3554	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		17
gcagaa	ggag cgaggcg	- '
<210>	3555	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3555 gege acetggaegt tg	22

<210>	3556	
<211>	34	
<212>	DNA	
<213>	Artificial Sequence .	
<220>		
<223>	Synthetic	
<400> ggaaga	3556 acaa ttttcaatca tttcatagta cata	34
	-	
<210>	3557	
<211>	11	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gtggca	3557 gccc g	11
	<del>-</del>	
<210>	3558	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> caacgt	3558 ccag gtgcgc	16
<210>	3559	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> aacgag	3559 gege acateattte atagtaca	28
<210>	3560	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggcagt	3560 ggtg gaagaacaat tttcac	26
<210>	3561	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tctgga	3561 cgtt ggtgg	15
<210>	3562	
<211>	22 .	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgtact	3562 atga aatgatgtgc gc	22

<210>	3563	
<211>	31	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		31
aacgag	gege acateattte atagtacate t	31
<210>	3564	
<211>	31	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3564 gcag tggtggaaga acaattttca g	31
u	5005 0550550050 000000000 5	-
<210>	3565	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3565 tggt ggcagccc	18
555	-33- 333	•
<210>	3566	
<211>	25	
<212>	DNA	

25
25
24
25
17

<210>	3570	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3570 ctag aggtgcgc	18
agacca		10
<210>	3571	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3571 cgcc tcctctagtg atcttgct	28
J		
<210>	3572	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3572 ctgt ttacaggtaa ggtgtgg	27
geecee	cege ceacaggeda ggegegg	2,
<210>	3573	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
	3573 atca ctagaggagg cg 2	2
<210>	3574	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<220>		
<221>	misc_feature	
<222>	(3)(3)	
<223>	The residue at this position is linked to a Z28 quenching group.	
<400> cactgc		.3
<210>	3575	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccagga	3575 agca agtggtgcgc ctcgttt 2	27
<210>	3576	
<211>	27	

<212> DNA

<220>		
<223>	Synthetic	
<400> ccagga	3576 agca agtggaggcg tgacggt	27
<210>	3577	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
	•	
<220>		
<223>	Synthetic	
<400> ccagga	3577 agca agtgacgcag cgacggt	27
<210>	3578	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3578 gcgc acagaggtta gagaag	26
<210>	3579	
<211>	26	
<212>	DNA .	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	

<400> ggagga	3579 aggg ctctagtata ataggc	26
<210>	3580	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcttcc	3580 cagc ttttgtagc	19
	3581	
	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400>		
	taac ctctgtgcgc	20
<210>	3582	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3582 cgcc tcgttggctc ttccc	25
203004	-9995000 00000	
<210>	3583	
<211>	18	

<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggcttgg		18
<210>	3584	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3584 agcc aacgaggcg	19
333 3		
<210>	3585	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtcac	3585 egec tegeetatgt cett	24
<210>	3586	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	

<220>

<223>	Synthetic	
	3586 ctta gtccaactta atgaac	26
<210>	3587	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3587 ctga cggaagcact gtc	23
<210>	3588	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3588 atag gcgaggcg	18
<210>	3589	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> aacgag	3589 gege aegetteega tgtaet	26
<210>	3590	

<211>	34	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcatgta	3590 aatc tgcaacattc tggcccatga tgta	34
<210>	3591	
<211>	39	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tctgca		39
<210>	3502	
<211>		
<212>		
	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		20
agtaca	cegg aagegtgege	20
<210>	3593	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> aacgagg	3593 gege aegetteega	20
<210>	3594	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcaacat	3594 ttct ggcccatgat gtc	23
<210>	3595	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgtacti	3595 tctg cattaaattc ct	22
<210>	3596	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tcggaag	3596 gegt gege	14

<210>	3597	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		2.0
aacgag	gege acetteegat	20
<210>	3598	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3598 ttct ggcccatgat gtga	24
gcaaca	ggeecatgat gega	27
<210>	3599	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3599 ctgc attaaattcc t	21
gracit	acyc accaaaccoc c	21
<210>	3600	
<211>	14	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> atcgga	3600 aggt gcgc	14
<210>	3601	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3601 cgcc tcctctttgc ttaac	25
<210>	3602	
<211>	43	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> catttt	3602 cctt ggctagaaaa cgaactctgt acgtataagg aca	43
<210>	3603	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ttgaate	3603 gttg ctgctgttca tcatca	26

<210>	3604	
<211>	19	
<212>		
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		19
greaag	caaa gaggaggcg	
<210>	3605	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3605 cgcc tccgattcct tcca	24
cegeca		
<210>	3606	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3606 tgtc ttatagtgga gactcaa	27
cacgec		- '
<210>	3607	
<211>	29	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> catacc	3607 gata gatgatttcc cagagccgc	29
<210>	3608	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tggaag	3608 gaat cggaggcg	18
<210>	3609	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3609 gcgc accgaacagt gt	22
<210>	3610	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3610 ttcg gtgcgc	16

<210>	3611	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3611 cgcc tccgaacagt gt	22
<210>	3612	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> acactg	3612 ttcg gaggcg	16
<210>	3613	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcaggg	3613 agaa gtcagctta	19
<210>	3614	
<211>	11	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> gcctcc	3614 ctcc a	11
<210>	3615	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3615 gege aegtaetegt agg	23
<210>	3616	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cctacg	3616 agta cgtgcgc	17
<210>	3617	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3617 cgcc tcgtactcgt agg	23

<210>	3618	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cctacga	3618 agta cgaggcg	17
<210>	3619	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3619 gggc cgcagc	16
J .		
<210>	3620	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcatgte	3620 ccag ctttg	15
<210>	3621	
<211>	26	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ccgtca	3621 cgcc tcttgtagac atcctg	26
<210>	3622	
<211>	32	
<212>	DNA	
<213>	Artificial Sequence	
	——————————————————————————————————————	
<220>		
<223>	Synthetic	
<400> gccaaca	3622 agga acagtaccaa taccaccaat ta	32
<210>	3623	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3623 cagg cgcaaggg	18
343433	2433 03044333	
<210>	3624	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3624 gtct acaagaggcg	20

<210>	3625	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3625 cgcc tccccgtttt c	21
<210>	3626	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>	•	
<223>	Synthetic	
<400>	3626 gggg aggcg	15
<b>J</b>		
<210>	3627	
<211>	21	
	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3627 gege acceegtttt e	21
<210>	3628	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> gaaaac	3628 ggggg tgcgc	15
<210>	3629	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gggcat	3629 cetgt tgeaegtaga caa	23
<210>	3630	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ttctca	3630 agate cegte	15
<210>	3631	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3631 acgcc tececgtttt et	22

<210>	3632	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gggcat	3632 ctgt tgcacgtaga caa	23
<210>	3633	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tctcaq	3633 atcc cgtca	15
<210>	3634	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>		
<400> agaaaa	3634 cggg gaggcg	16
<210>	3635	
<211>	23	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> aacgag	3635 gcgc acctccaatc tca	23
<210>	3636	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cccca	3636 ctaa gatttatacc cttcta	26
<210>	3637	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gccaaa	3637 tctc ctcca	15
<210>	3638	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3638 tgga ggtgcgc	17
عادة و د		

<210>	3639	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3639 gcgc actcggactg t	21
aacgag	gege deceggaeeg e	
<210>	3640	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gccata	3640 atgt ccaggttcac atca	24
<b>J</b>		
<210>	3641	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>	•	
<223>	Synthetic	
<400> ggcttc	3641 cgaa tcatgtt	17
<210>	3642	
<211>	15	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> acagtc	3642 cgag tgcgc	15
<210>	3643	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3643 gcgc accaaacctg ttca	24
<210>	3644	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> catcca	3644 ctgt ggaaatatcg ccgga	25
<210>		
<211>		
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400>		
	ggcc tgtg	14

caatccggcc tgtg

<210>	3646	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3646 ggtt tggtgcgc	18
tyaaca	gger eggegege	10
<210>	3647	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3647 gege aegeaaeteg ea	22
3 3		
<210>	3648	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggcctg	3648 caga gactctgc	18
<210>	3649	
<211>	15	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> gccacto	3649 gcta agcac	15
<210>	3650	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgcgagt	3650 ttgc gtgcgc	16
<210>	3651	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
	3651 gege accetetetg a	21
<210>	3652	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> gcctttt	3652 caaa aggaaagggc aaccttga	28

<210>	3653	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tggtcct	3653 Egac ctaca	15
<210>	3654	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tcagaga	3654 aggg tgcgc	15
<210>	3655	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgagg	3655 gege aegatageea g	21
2 3.		
<210>	3656	
<211>	31	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> tgcatce	3656 cttc acatgtcatg acattgaagt c	31
<210>	3657	
<211>	12	
<212>	DNA .	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tggcct	3657 tgtc cc	12
<210>	3658	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3658 atcg tgcgc	15
<210>	3659	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3659 gege aegeagtgte t	21

<210>	3660	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aagttg	3660 ctgg aagccacctc	20
<210>	3661	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3661 cagt aggaca	16
<210>	3662	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agacac	3662 tgcg tgcgc	15
<210>	3663	
<211>	21	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> aacgagg	3663 gcgc accatccaga g	21
<210>	3664	
<211>	30	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400>		
	aaag gaaactggag gtatacttta	30
<210>	3665	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cctctt	3665 tggt actaagc	17
<210>	3666	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctctgga	3666 atgg tgcgc	15

<210>	3667	
<211>	25	
<212>	DNA .	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3667 gege acettetatt agtga	25
<210>	3668	
<211>	35	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cagatt	3668 catg aagaaccctg tatcattgat atcaa	35
_		
<210>	3669	
<211>	24	
<212>		
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgtttg		24
	3669	24
tgtttg	3669 acat cagatettet aaat	24

<220>		
<223>	Synthetic	
<400> tcacta	3670 atag aaggtgcgc	19
<210>	3671	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3671 gege acaatateet gtee	24
<210>	3672	
<211>	29	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cccgtag	3672 gaaa ccttacattt atggtcctc	29
<210>	3673	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> atcaaca	3673 actg accateceet etgt	24

atcaacactg accatecect etgt

<210>	3674	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggacag		18
<210>	3675	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag		24
<210>	3676	
<211>	32	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gattca	3676 tcag ctgcattttc taattcaact ta	32
<210>	3677	
<211>	20	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> tctgca	3677 ttgt gacaagtttg	20
<210>	3678	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cagcag	3678 gaaa tggtgcgc	18
<210>	3679	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
222		
<220>		
	Synthetic	
<400> ccgtca	3679 egec tecatecaga g	21
<210>	3680	
<211>	30	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cctcca	3680 aaag gaaactggag gtatacttta	30

<210>	3681	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cctctti	3681 tggt actaagc	17
<210>	3682	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3682 atgg aggcg	15
33		
<210>	3683	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3683 gcgc acctttcaag gtg	23
<210>	3684	
<211>	20	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ctgtag	3684 gccc caaagacgta	20
<210>	3685	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> acaggc	3685 ttgc ctgt	14
<210>	3686	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cacctt	3686 gaaa ggtgcgcctc gtt	23
<210>	3687	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3687	

aacgaggcgc acttcactcc aaat

<210>	3688	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3688 ggat tgttgagaga gtcgatga	28
cccgc	ggae egeegaga geegaega	20
<210>	3689	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3689 ctag tgatcacatc	20
33-5		
<210>	3690	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3690 agtg aagtgegeet egtt	24
466633		
<210>	3691	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> aacgag	3691 gcgc actcactcca aat	23
<210>	3692	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ttgtgg	3692 attg ttgagagagt cgatgta	27
<210>	3693	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gatgtg	3693 ctag tgatcacatc	20
<210>	3694	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> atttgg	3694 agtg agtgegeete gtt	23

atttggagtg agtgcgcctc gtt

<210>	3695	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3695 ggcgc accataatga aggagag	27
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
<210>	3696	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3696 agtgg ccagttcata a	21
333 3		
<210>	3697	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3697 Egete gtggttt	17
<210>	3698	
<211>	21	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ctctcc	3698 ttca ttatggtgcg c	21
<210>	3699	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Symthetic	
	Synthetic	
<400> aacgag	gcgc agataatgaa ggagag	26
<210>	3700	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggtgag	3700 tggc ctgttcatac c	21
<210>	3701	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
•••		
<220>		
<223>	Synthetic	
<400>	3701	

aacactgctc gtggttt

<210>	3702	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3702 ttca ttatctgcgc	20
		_ ,
<210>	3703	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3703 gege aegagageaa aeet	24
<210>	3704	
<211>	30	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>		
<400> actctga	3704 atta gagcaagttt catgttcatc	30
<210>	3705	
<211>	18	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> catgcc	3705 aatg cagtttct	18
<210>	3706	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aggttt	3706 gete tegtgege	18
<210>	3707	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgagg	3707 gege aegttteaag gtg	23
<210>	3708	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctgtag	3708 gccc caaagacgtc	20

<210>	3709	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> acaggc	3709 ttgc ctgt	14
<210>	3710	
<211>	23	
<212>	DNA .	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3710 gaaa cgtgcgcctc gtt	23
<210>	3711	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> aacgag	3711 gege acttteaagg tg	22
<210>	3712	
<211>	21	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ctgtag	3712 gccc caaagacgtg a	21
<210>	3713	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> acaggc	3713 ttgc ctgt	14
<210>	3714	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cacctt	3714 gaaa gtgcgcctcg tt	22
<210>	3715	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3715	

aacgaggcgc acctcactcc aaat

3716	
28	
DNA	
Artificial Sequence	
Synthetic	
	28
ggat tgttgagaga gttgatga	20
3717	
20	
DNA	
Artificial Sequence	
Synthetic	
	20
3718	
24	
DNA	
Artificial Sequence	
Synthetic	
3718 magtg aggtgcgcct cgtt	24
3719	
27	
DNA	
	DNA Artificial Sequence  Synthetic 3716 Eggat tgttgagaga gtcgatga  3717 20 DNA Artificial Sequence  Synthetic 3717 gctag tgatcacatc  3718 24 DNA Artificial Sequence  Synthetic 3718 24 DNA Artificial Sequence

<220>		
<223>	Synthetic	
<400> aacgag	3719 gcgc actataatga aggagag	27
<210>	3720	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
222		
<220>		
	Synthetic	
<400> gggtgag	3720 gtgg ccagttcata a	21
<210>	3721	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacact	3721 gete gtggttt	17
<210>	3722	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctctcct	3722 ttca ttatagtgcg c	21

<210>	3723	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3723 gege agataatgaa ggagag	26
<210>	2724	
<211>		
<211>		
	Artificial Sequence	
(213)	Arctificial Sequence	
<220>		
	Synthetic	
<400>	3724	
gggtga	gtgg ccagttcata tc	22
<210>	3725	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3725 gctc gtggttt	17
aacact	geee geggeee	- /
<210>	3726	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220:		
<223	Synthetic	
	octtca ttatctgcgc	20
<210:	3727	
<211:	24	
<212	DNA	
<213	Artificial Sequence	
<220		
<223	Synthetic	
	3727	24
aacy	ggcgc accgagagca aacc	21
<210	3728	
<211:	27	
<212	DNA	
<213	Artificial Sequence	
<220:		
<223	Synthetic	
	. 3728 uctaga gcaagtttca tgttcaa	27
cccg	delaga geaageeeaa egeeeaa	_,
<210	3729	
<211	18	
<212	DNA	
<213	Artificial Sequence	
<220		
<223	Synthetic	
<400: tcate	3729 gccaat gcagtttc	18

tcatgccaat gcagtttc

3730	
18	
DNA	
Artificial Sequence	
·	
Synthetic	
	18
	0
3731	
24	
DNA	
Artificial Sequence	
Synthetic	
	24
3732	
28	
DNA	
Artificial Sequence	
Synthetic	
3732	28
	_
3733	
18	
DNA	
	DNA Artificial Sequence  Synthetic 3730 petet eggtgege  3731 24 DNA Artificial Sequence  Synthetic 3731 gege aggagageaa acct  3732 28 DNA Artificial Sequence  Synthetic 3733 18

<220>		
<223>	Synthetic	
<400> catgcc	3733 aatg cagtttct	18
<210>	3734	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aggttt	3734 egte teetgege	18
<210>	3735	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3735 gege acageatgat aagea	25
<210>	3736	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgctta	3736 tcat gctgtgcgc	19

<210>	3737	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3737 cgcc tcagcatgat aagca	25
<210>	3738	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgctta	3738 tcat gctgaggcg	19
<210>	3739	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggtgca	3739 gccc agtgagc	17
<210>	3740	
<211>	22	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> gcaaca	3740 ttaa caccaggatg at	22
<210>	3741	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3741 gcgc acggaggtga attag	25
<210>	3742	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctaatt	3742 cacc tccgtgcgc	19
<210>	3743	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtcac	3743 cgcc tcggaggtga attag	25

3/44	
19	
DNA	
Artificial Sequence	
Synthetic	
	19
3745	
24	
DNA	
Artificial Sequence	
Synthetic	
	24
3746	
18	
DNA	
Artificial Sequence	
Synthetic	
3746 Agcac ctgtttct	18
3747	
24	
DNA	
	DNA Artificial Sequence  Synthetic 3744 ceacc tccgaggcg 3745 24 DNA Artificial Sequence  Synthetic 3745 gccca tttttcttgt tcac 3746 18 DNA Artificial Sequence  Synthetic 3746 agcac ctgtttct 3747

<220>		
<223>	Synthetic	
<400> aacgag	3747 gcgc acggaggtga atta	24
<210>	3748	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		18
taatto	acct ccgtgcgc	10
<210>	3749	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3749 cgcc tcggaggtga atta	24
cogcca	0500 0055455054 4004	-
<210>	3750	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3750 acct ccgaggcg	18

<210>	3/51	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tcacag	3751 ccca ttttcttgt tcac	24
<210>	3752	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gtgtta	3752 agca cctgtttc	18
<210>	3753	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3753 gege aegaeagatt eettt	25
<210>	3754	
<211>	19	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> aaagga	3754 atct gtcgtgcgc	19
<210>	3755	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3755 cgcc tcgacagatt ccttt	25
<210>	3756	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aaagga	3756 atct gtcgaggcg	19
<210>	3757	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400×	3757	

atgtcgcagt gactttccca atagc

<210>	3/58	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3758 tata tgtgtcgatt atgg	24
tacctt	tata tytyttyatt atyy	
<210>	3759	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3759 gcgc acggttttca actg	24
<210>	3760	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3760 aaaa ccgtgcgc	18
J J		
<210>	3761	
<211>	24	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ccgtcae	3761 egec teggttttea actg	24
<210>	3762	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cagttga	3762 aaaa ccgaggcg	18
<210>	3763	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tctgtg	3763 caga aacaatagtt gtctgc	26
<210>	3764	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gagaggo	3764 caaa ggcct	15

<210>	3765	
<211>	30	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3765 gege acegtatttg aagacataag	30
aacgag	gege acceptance augustatuag	,
<210>	3766	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3766 ccat actgttgctc taa	23
J3J-		
<210>	3767	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3767 cacc aatatagctg ct	22
<210>	3768	
<211>	24	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> cttatg	3768 tett caaataeggt gege	24
<210>	3769	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3769 gcgc accagcagta aaacat	26
<210>	3770	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aggtaa	3770 aagg acaatgacat caa	23
<210>	3771	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400×	3771	

gagaatttgg caattccaac g

<210>	3772	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
		20
atgitt	Lact getggtgege	20
<210>	3773	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
		28
aacgag	gege decededat cedatate	
<210>	3774	
<211>	30	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3774	30
July 1		
<210>	3775	
<211>	25	
<212>	DNA	
	<211> <212> <213> <220> <223> <400> atgtttt  <210> <211> <212> <213> <400> acgagg <210> <221> <2213> <400> cttaggg <210> <2212> <213>	<pre>&lt;211&gt; 20 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; &lt;223&gt; Synthetic &lt;400&gt; 3772 atgttttact gctggtgcgc  &lt;210&gt; 3773 &lt;211&gt; 28 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; &lt;223&gt; Synthetic &lt;400&gt; 3773 &lt;211- 28 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; &lt;2213 Artificial Sequence  &lt;220&gt; &lt;2213 Synthetic &lt;400 3773 aacgaggcgc acctacatat ccaatatc &lt;210 3774 &lt;211&gt; 30 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; &lt;221&gt; Synthetic &lt;400 3774 &lt;211&gt; 30 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence</pre>

<220>		
<223>	Synthetic	
<400> cacgta	3775 acatt ttagcaaaca gagat	25
<210>	3776	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gatatt	3776 tggat atgtaggtgc gc	22
<210>	3777	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3777 ggcgc accaagaagg atatcatc	28
<210>	3778	
<211>	30	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3778	

cagattagag ggaaatatag aagttgaaaa

<210>	3779	
<211>	29	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaagta	3779 agaa atgaaaattt ggcaattcc	29
<210>	3780	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3780 atcc ttcttggtgc gc	22
gaegae		
<210>	3781	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3781 gege actaaatgtg gtacet	26
<210>	3782	
<211>	31	
<212>	DNA	

<220>		
´<223>	Synthetic	
<400> caggtte	3782 gaac aatcttcaca gtcaacaaga a	31
<210>	3783	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3783 gcag agaacaaaga	20
<210>	3784	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3784 caca tttagtgcgc	20
<210>	3785	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> aacgag	3785 gege aegetgttgt e	21

<210>	3 / 86	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gctgca	3786 gttg gtgtagaaaa cctgc	25
<210>	3787	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3787 vatcc tggac	15
<210>	3788	
<211>	15	
<212>		
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gacaac	3788 agcg tgcgc	15
<210>	3789	
<211>	24	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> aacgag	3789 gcgc acccaaaatc ctca	24
<210>	3790	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3790	
ggctgg	gcat ccagga	16
<210>	3791	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggaaca	3791 tgaa ctggatgcc	19
<210>	3792	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400×	3702	

tgaggatttt gggtgcgc

<210>	3793	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3793 cgcc tcgctaaggc tc	22
<210>	3794	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gttcat	3794 tcct acctgacagg agatgc	26
_		
<210>	3795	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aaagaa	3795 ggtg atccaggc	18
<210>	3796	
<211>	16	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> gagcct	3796 tagc gaggcg	16
<210>	3797	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3797 gege accettgace tte	23
<210>	3798	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaaggt	3798 caag ggtgcgc	17
<210>	3799	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3799 cgcc tcccttgacc ttc	23

<210	> 3800	
<211	> 17	
<212	> DNA	
<213	> Artificial Sequence	
<220		
<223	> Synthetic	
	> 3800 gtcaag ggaggcg	17
guug	geedag ggaggeg	
<210	> 3801	
<211	> 25	
<212	> DNA	
<213	> Artificial Sequence	
<220	>	
<223	> Synthetic	
	> 3801 gttgcg ggcaacatag accaa	25
<210	> 3802	
<211	> 25	
<212	> DNA	
<213	> Artificial Sequence	
<220		
<223	Synthetic	
<400:	> 3802 gtttcg ggcaacatag accaa	25
<b>.</b>		
<210	> 3803	
<211:	> 18	
<212	> DNA	

<220>		
<223>	Synthetic	
<400> tgatcc	3803 aaca gagtctgg	18
<210>	3804	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3804 gege accegeateg aag	23
<210>	3805	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3805 tgcg ggtgcgc	17
cccga	raca aaracac	
<210>	3806	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3806 cgcc tcccgcatcg aag	23

ccgtcacgcc tcccgcatcg aag

<210>	3807	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3807 tgcg ggaggcg	17
	-5-5-55-55-5	
<210>	3808	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctgcca	3808 tott otoogoatag ta	22
<210>	3809	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3809 Etct gege	14
25000	3-3-	
<210>	3810	
<211>	22	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> aacgag	3810 gege accegeatag te	22
<210>	3811	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gactat	3811 gcgg gtgcgc	16
<210>	3812	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3812 cgcc tcccgcatag tc	22
<210>	3813	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gactat	3813 gegg gaggeg	16

<210>	3814		
<211>	19		
<212>	DNA		
<213>	Artificial	Sequence	
<220>			
<223>	Synthetic		
<400>	3814 ctgc catctt	cta	19
cgcago	orgo oucoes		
<210>	3815		
<211>	16		
<212>	DNA		
<213>	Artificial	Sequence	
<220>			
<223>	Synthetic		
<400>	3815 gaag cgctca		16
-3	JJ - J		
<210>	3816		
<211>	25		
<212>	DNA		
<213>	Artificial	Sequence	
<220>			
<223>	Synthetic		
<400>	3816 gcgc accaatt	tqcc ataqc	25
	J J		
<210>	3817		
<211>	19		
<212>	DNA		

220>		
223>	Synthetic	
		19
210>	3818	
211>	25	
212>	DNA	
213>	Artificial Sequence	
20>		
23>	Synthetic	
		25
210>	3819	
211>	19	
212>	DNA	
213>	Artificial Sequence	
20>		
23>	Synthetic	
		19
210>	3820	
211>	25	
212>	DNA	
213>	Artificial Sequence	
20>		
23>	Synthetic	
	3820 tttt gcccaaagca tcaga	25
	23> 200> 211> 213> 200> 213> 210> 213> 210> 213> 210> 211> 211> 212> 213> 211> 212> 213> 211> 212> 213> 211> 212> 213> 211> 212> 213> 211> 213> 210> 211> 211> 211> 211> 210> 211> 210> 211> 210> 210	223> Synthetic 200> 3818 211> 25 212> DNA 213> Artificial Sequence 220> 233> Synthetic 240> 3818 251cacgcc tccaattgcc atagc 2510> DNA 2511> 19 2512> DNA 252> DNA 253> Artificial Sequence 260> 3819 271> 19 272> DNA 273> Artificial Sequence 270> 273> Synthetic 270> 3819 271> 19 271> DNA 271> Artificial Sequence 270> 271> Synthetic 271> Synthetic 272> Synthetic 273> Synthetic 274> Artificial Sequence 275> 275> 275> 275> 275> 275> 275> 275>

<210>	3821	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tttcttc		20
<210>	3822	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3822 gege acegetttge att	23
J J.		
<210>	3823	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aatgcaa	3823 aagc ggtgcgc	17
<210>	3824	
<211>	23	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ccgtca	3824 egec teegetttge att	23
<210>	3825	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		1.5
aatgca	aagc ggaggcg	17
<210>	3826	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3826 Ectt agtctccatg a	21
cagece	section agreements at	
<210>	3827	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3827 Etga tcaccaaac	19
Judan	3	

<210>	3828	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3828 gege acegaeggee aa	22
<210>	3829	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ttggcc	3829 gtcg gtgcgc	16
<210>	3830	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3830 cgcc tccgacggcc aa	22
<210>	3831	
<211>	16	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ttggcc	3831 gtcg gaggcg	16
<210>	3832	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gtgatg	3832 aagg ccactgtcag caa	23
<210>	3833	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaggaa	3833 acca atcacgtcc	19
<210>	3834	
<211>	13	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<220>		

<221> misc\_feature

<222>	(3)(3)										
<223>	The residue	at	this	position	is	linked	to	a	Z28	quenching	group.
<400>											
cactgc	ttcg tgg										13
<210>	3835										
<211>	27										
<212>	DNA										
<213>	Artificial S	Sequ	ience								
<220>											
<223>	Synthetic										
<400>		raa	ctca	+++							27
ccayya	agca agtggtgo	.gc	cccg								21
<210>	3836										
<211>	27										
<212>	DNA										
<213>	Artificial S	equ	ience								
<220>											
<223>	Synthetic										
<400>			<b>.</b>								27
ccagga	agca agtggagg	geg	tgac	ggt							21
<210>	3837										
<211>	27										
<212>	DNA										
<213>	Artificial S	equ	ience								
<220>											
<223>	Synthetic										
<400> ccagga	3837 agca agtgacgo	ag	cgac	ggt							27

<210>	3838	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3838 gege aetgtgagea gga	23
uucgug	gogo	
<210>	3839	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3839 agaa ggttagaagt gaggca	26
33		
<210>	3840	
<211>	12	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3840 gcca gg	12
<210>	3841	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> tcctgc	3841 tcac agtgcgc	17
<210>	3842	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3842 gege acaateactg egee	24
<210>	3843	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3843 agga cattcaggat gactgc	26
<210>	3844	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>	·	
<223>	Synthetic	
<400> tggcact	3844 tcac tggg	14

<210>	3845	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3845 tcac agtgcgc	17
cccgc	cede agegege	- '
<210>	3846	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3846 gege acaateactg ege	23
<210>	3847	
<211>	14	
<212>		
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> ctggca	3847 ctca ctgg	14
<210>	3848	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> gcgcag	3848 tgat tgtgcgc	17
<210>	3849	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3849 cgcc tccttgctgt gt	22
<210>	3850	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ggttct	3850 gggt ttcacatttg taga	24
<210>	3851	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3851 ttgt gacattgaat agagt	25

3852	
17	
DNA	
Artificial Sequence	
Synthetic	
	17
geady gaggege	
3853	
23	
DNA	
Artificial Sequence	
Synthetic	
	23
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
3854	
23	
DNA	
Artificial Sequence	
Synthetic	
3854 acat catteettgt gaa	23
3855	
14	
DNA	
	DNA Artificial Sequence  Synthetic 3852 goaag gaggcgc 3853 23 DNA Artificial Sequence  Synthetic 3853 ggcgc accactgagt aga 3854 23 DNA Artificial Sequence  Synthetic 3853 ggcgc accactgagt aga 3854 23 DNA Artificial Sequence

<220>		
<223>	Synthetic	
<400> gtgagg	3855 gtcc tgtt	14
<210>	3856	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tctact	3856 cagt ggtgcgc	17
<210>	3857	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3857 gege aettgetgga t	21
<210>	3858	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ttggag	3858 ataa agagetettg tgtgtga	27

<210>	3859	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gttccc	3859 atca atcaga	16
<210>	3860	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> atccag	3860 caag tgcgc	19
<210>	3861	
<211>	29	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3861 egec tegtttetat eteetttgt	29
<210>	3862	
<211>	23	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> cgtcag	3862 ttgg tcggttcctg ttc	23
<210>	3863	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> acaaag	3863 gaga tagaaacgag gcg	23
<210>	3864	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3864 egec tegtttetat ete	23
<210>	3865	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3865 ttgg tcggttcctg ttc	23

cgtcagttgg tcggttcctg ttc

<210>	3866	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3866 tacc gcttcc	16
cccgc	tace gettee	
<210>	3867	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3867 gaaa cgaggcg	17
JJ	5	
<210>	3868	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3868 gege actgttgtte et	22
	J-J JJ	
<210>	3869	
<211>	19	
<212>	DNA	

<220>	
<223> Synthetic	
<400> 3869 gctgggccat gcagtagaa	19
<210> 3870	
<211> 14	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 3870 gagcccgagg atgt	14
<210> 3871	
<211> 16	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 3871 aggaacaaca gtgcgc	16
<210> 3872	
<211> 21	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 3872 aacgaggcgc actgttgttc c	21

<210>	3873	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tgagcc	3873 egag gatgt	15
<210>	3874	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3874 gege aegtetgagt tgt	23
<210>	3875	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gtgggct	3875 ccag ccgtc	15
<210>	3876	
<211>	12	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ccagca	3876 gctg gg	12
<210>	3877	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> acaact	3877 caga cgtgcgc	17
<210>	3878	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3878 cgcc tcggcttgtg tgttc	25
<210>	3879	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3879	

ccgggatagg ttcagggagg cgtc

<210>	3880	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3880 atgg gggtccct	18
ggeece	2099 9990000	
<210>	3881	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3881 acaa gccgaggcg	19
,		
<210>	3882	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3882 gege aeggettgtg t	21
J5.		
<210>	3883	
<211>	20	
<212>	DNA	

<220>		
<223>	Synthetic	
	3883 gttca gggaggcgtc	20
<210>	3884	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3884 gtttc atgggg	16
<210>	3885	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3885 agccg tgcgc	15
<210>	3886	
<211>		
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacga	3886 ggcgc acgtatttct tgatcttc	28

<210>	3887	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ttttgg	3887 gcct gttgtagtct c	21
<210>	3888	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cgctgg	3888 eggt tatagag	17
<210>	3889	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaagat	3889 caag aaatacgtgc gc	22
<210>	3890	
<211>	20	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> aacgag	3890 gege acaccatgge	20
<210>	3891	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctagtg	3891 tttt aggtgtgcag gtc	23
<210>	3892	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cccaaa	3892 tgct gttgtatct	19
<210>	3893	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gccatg	3893 gtgt gcgc	14

<210>	3894	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		21
aacyay	gege acaceatgge e	21
<210>	3895	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3895 tttt aggtgtgcag gtc	23
ccagcg	ceee aggegegeag gee	
<210>	3896	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>	•	
<223>	Synthetic	
<400>	3896 gctg ttgtatctga	20
ccaaac	geeg eegeaceega	
<210>	3897	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> ggccate	3897 ggtg tgcgc	15
<210>	3898	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgcgg	3898 gege aegecatttt eeae	24
<210>	3899	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	
<220>	•	
<223>	Synthetic	
<400> ccacag	3899 tcga tgaatccaga aaagcga	27
<210>	3900	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> catgata	3900 attc ggcaagcag	19

<210>	3901	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3901 atgg cgtgcgc	17
cggaaa	2099 0909090	
<210>	3902	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3902 gege aegecatttt eea	23
5 5		
<210>	3903	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3903 tatt cggcaagcag	20
- 3		
<210>	3904	
<211>	24	
<212>	DNA	

<220		
<223	Synthetic	
	. 3904 aggaga accagttaat taag	24
<210>	3905	
<211>	16	
<212	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3905 geeteg teetga	16
<210>	3906	
<211:	13	
<212>	DNA	
<213	Artificial Sequence	
<220>		
<223	Synthetic	
	. 3906 eeggac agg	13
33	• • • • • • • • • • • • • • • • • • • •	
<210	3907	
<211:	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctgaa	. 3907 Ltgaac tggtgcgc	18

<210>	3908	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3908 cgcc tcgtccattg ttca	24
<210>	3909	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3909 ctgt tgtatccttt c	21
55		
<210>	3910	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400> tcatca	3910 tcaa agtgggca	18
<210>	3911	
<211>	18	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> tgaaca		18
<210>	3912	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca		25
<210>	3913	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> catcat	3913 caaa gtgggcatc	19
<210>	3914	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> atgaac	3914 aatg gacgaggcg	19

<210>	3915	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3915 gcgc actcaaggga taagga	26
<210>		
<211>		
<212>		
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cctcgg	3916 agac tggtaatggc aa	22
<210>	3917	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agggtc	3917 acat ttgtctg	17
<210>	3918	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> tcctta	3918 teee ttgagtgege	20
<210>	3919	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtcg	3919 ctgc gtttcttccc	20
<210>	3920	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> caagct	3920 ttct cctgatagct ca	22
<210>	3921	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ctaccc	3921 cgca cttc	14

<210>	3922	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3922 aaac gcag	14
333443	adde godg	
<210>	3923	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtcg	3923 ctgc gtttcttccc c	21
<210>	3924	
<211>		
<212>		
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tacccc	3924 gcac ttct	14
<210>	3925	
<211>	15	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> ggggaa	3925 gaaa cgcag	15
<210>	3926	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3926 gcgc acggcatcaa gg	22
<210>	3927	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gtttct	3927 cete ggagaetggt aate	24
<210>	3928	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gataag	3928 gaag ggtcacattt g	21

<210>	3929	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>		16
certga	tgcc gtgcgc	10
<210>	3930	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>	•	
<223>	Synthetic	
<400>	3930 gege actettette e	21
<210>	3931	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3931 agct ttctcctgat agca	24
J		
<210>	3932	
<211>	13	
<212>	DNA	

<220>	
<223> Synthetic	
<400> 3932 cctaccccgc act	13
<210> 3933	
<211> 15	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 3933 ggaagaagag tgcgc 1	15
<210> 3934	
<211> 24	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 3934 aacgaggcgc accttttgtt ccga 2	24
<210> 3935	
<211> 29	
<212> DNA	
<213> Artificial Sequence	
<220>	
<223> Synthetic	
<400> 3935 agagtgatgg gaattttctg cattttcta 2	2 9

<210>	3936	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3936 acat ggtaaaagtt gttt	24
gragra	acat ggtaaaagtt gttt	
<210>	3937	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3937 caaa aggtgcgc	18
0099		
<210>	3938	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3938 gege acettttgtt eeg	23
<210>	3939	
<211>	29	
<212>		
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> agagtg	3939 atgg gaattttctg cattttcta	29
<210>	3940	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agtagt	3940 gaca tggtaaaagt tgt	23
<210>	3941	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3941 aaaa ggtgcgc	17
<210>	3942	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3942 cgcc tccttttgtt ccga	24

<210>	3943	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3943 acat ggtaaaagtt gttt	24
gragra	acat ggtaaaagtt gttt	
<210>	3944	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3944 caaa aggaggcg	18
55		
<210>	3945	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3945 egec teettttgtt eeg	23
<b>J</b> =		
<210>	3946	
<211>	17	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> cggaac	3946 aaaa ggaggcg	17
<210>	3947	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3947 cgcc tcggagtcaa t	21
<210>	3948	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcaggt	3948 tgct gtgttgcaac	20
<210>	3949	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gaagag	3949 gtgc acagaacg	18

<210>	3950	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3950 tccg aggcg	15
accgac	aggeg	
<210>	3951	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3951 gcgc actgatggga attttc	26
<210>	3952	
<211> .	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3952 cett egeceaggga	20
5-2-4-0	<del></del>	-
<210>	3953	
<211>	20	
<212>	DNA	•

<220>		
<223>	Synthetic	
<400> tttatt	3953 tott ottttgtood	20
<210>	3954	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Synthetic	
<400>		20
<210>	3955	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3955 gege actgettett ca	22
<210>	3956	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3956 gact catctgctct tta	23

<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
		18
geeee	-gac cccaggec	
<210>	3958	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
		16
<210>	3959	
<211>	24	,
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> aacgag	3959 gege actgettett cagt	24
5 5.	<b>-</b>	
<210>	3960	
<211>	23	
<212>	DNA	
	<212> <213> <220> <223> <400> gtctttt <210> <211> <212> <213> <2213> <400> tgaagaa <210> <2213> <400> tgaagaa <210> <211> <212> <213> <211> <212> <211> <211> <211>	<pre>&lt;223&gt; Synthetic &lt;400&gt; 3957 gtcttttgac ttcaggtc  &lt;210&gt; 3958 &lt;211&gt; 16 &lt;2212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; &lt;223&gt; Synthetic &lt;400&gt; 3958 tgaagaagca gtgcgc  &lt;210&gt; 3959 &lt;211&gt; 24 &lt;212&gt; DNA &lt;213&gt; Artificial Sequence  &lt;220&gt; &lt;211&gt; 24 &lt;212&gt; DNA &lt;213&gt; Synthetic &lt;400</pre>

<220>		
<223>	Synthetic	
<400> tctctt	3960 gact catctgctct tta	23
<210>	3961	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> cttttg	3961 actt caggtcac	18
<210>	3962	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> actgaa	3962 gaag cagtgege	18
<210>	3963	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> ccgtca	3963 cgcc tcgcctttgt ttg	23

<210>	3964	
<211>	34	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3964 catt gacataaagt gtttgcgtac tctc	34
gggcaa	cace gacacaaage geeegeac eeee	
<210>	3965	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3965 aatt ccatgtcatc	20
<210>	3966	
<211>		
<212>		
<213>	Artificial Sequence	
<220>		
<223>		
<400> caaaca	3966 aagg cgaggcg	17
<210>	3967	
<211>	27	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> aacgag	3967 gege acatgtgtaa tttaget	27
<210>	3968	
<211>	25	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gtgggc	3968 acag aatccatttc atcac	25
<210>	3969	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3969 acaa gaacttttcc a	21
33		
<210>	3970	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> agctaa	3970 atta cacatgtgcg c	21

<210>	3971	
<211>	28	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3971 gcgc acatgtgtaa tttagctc	28
aacgag	gege acatgigida titagete	20
<210>	3972	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3972 caag aacttttcca atat	24
330000		
<210>	3973	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3973 aatt acacatgtgc gc	22
545004		
<210>	3974	
<211>	23	
<212>	DNA	
<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400> aacgagg	3974 gege aegeetttgt ttg	23
<210>	3975	
<211>	32	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gcaacat	3975 ttga cataaagtgt ttgcgtactc tc	32
<210>	3976	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3976 aatt ccatgtcat	19
<210>	3977	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> caaacaa	3977 aagg cgtgcgc	17

•	<210>	3978	
	<211>	23	
	<212>	DNA	
	<213>	Artificial Sequence	
	<220>		
	<223>	Synthetic	
	<400>	3978 egec tegeetttgt ttg	23
•	cogcou		
	<210>	3979	
	<211>	32	
	<212>	DNA	
	<213>	Artificial Sequence	
	<220>		
	<223>	Synthetic	
	<400> gcaaca	3979 ttga cataaagtgt ttgcgtactc tc	32
	<210>	3980	
	<211>	19	
	<212>		
	<213>	Artificial Sequence	
	<220>		
		Synthetic	
	<400> ggttcg	3980 aatt ccatgtcat	19
	01.0	2001	
	<210>	3981	
	<211>	17	
	<212>	DNA	
	<213>	Artificial Sequence	

<220>		
<223>	Synthetic	
<400>	3981	
caaaca	aagg cgaggcg	17
<210>	3982	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3982 gege acetteettg g	21
aagcag	gege accerecity g	21
<210>	3983	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3983 acgg cgcttgcgtg a	21
<210>	3984	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3984	

tcttagacct gcgagcc

<210>	3985	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3985	15
ccaag	gaagg tgcgc	
<210>	3986	
<211>	22	
<212,>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3986 ggcgc actgcttcct tg	22
J .		
<210>	3987	
<211>	20	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gctct	3987 tcacg gcgcttgcga	20
_		
<210>	3988	
<211>	18	
<212>	DNA	

<220>		
<223>	Synthetic	
<400> gtctta	3988 gacc tgcgagcc	18
<210>	3989	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3989 agca gtgcgc	16
<210>	3990	
<211>	21	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3990 gege acetteettg g	21
aagcag	gage accepting g	21
<210>	3991	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		,
<223>	Synthetic	
<400> ctcccg	3991 gcgc tttcgtga	18

<210>	3992	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3992 acct gcgagcc	17
ccccag	acce gegagee	- '
<210>	3993	
<211>	15	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400>	3993 aagg tgcgc	15
<210>	3994	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
	,	
<220>		
<223>	Synthetic	
<400>	3994 gege actgetteet tg	22
<210>	3995	
<211>	17	
<212>	DNA	

<220>		
<223>	Synthetic	
<400>	3995 ggcg ctttcga	17
<210>	3996	
<211>	18	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> gtctta	3996 gacc tgcgagcc	18
<210>	3997	
<211>	16	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	3997 agca gtgcgc	16
<210>	3998	
<211>	14	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
	Symthotic	
<223>	Synthetic	

<220>

<221>	misc_feature	
<222>	(4)(4)	
<223>	The residue at this position is an Eclipse quencher.	
<400>	3998 ttac ttcc	14
ogunoc		
<210>	3999	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<220>		
<221>	misc_feature	
<222>	(4)(4)	
<223>	The residue at this position is an Eclipse quencher.	
<400>	3999 ttac ttcctct	17
-3		
<210>	4000	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> 4000 cgacttttac ttcctct 17		
-		
<210>	4001	

<211> 25

<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
	4001 ccta cggaaacctt gttaa	25
<210>	4002	
<211>	22	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Synthetic	
<400> tctaga	4002 tagt caagttcgac cg	22
<210>	4003	
<211>	29	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223> ·	Synthetic	
<400> tctaga	4003 tagt caagttegae egtettete	29
<210>	4004	
<211>	17	
<212>	DNA	
<213>	Artificial Sequence	

<220>

<223> Synthetic

<400> 4004 agaggaagta aaattcg